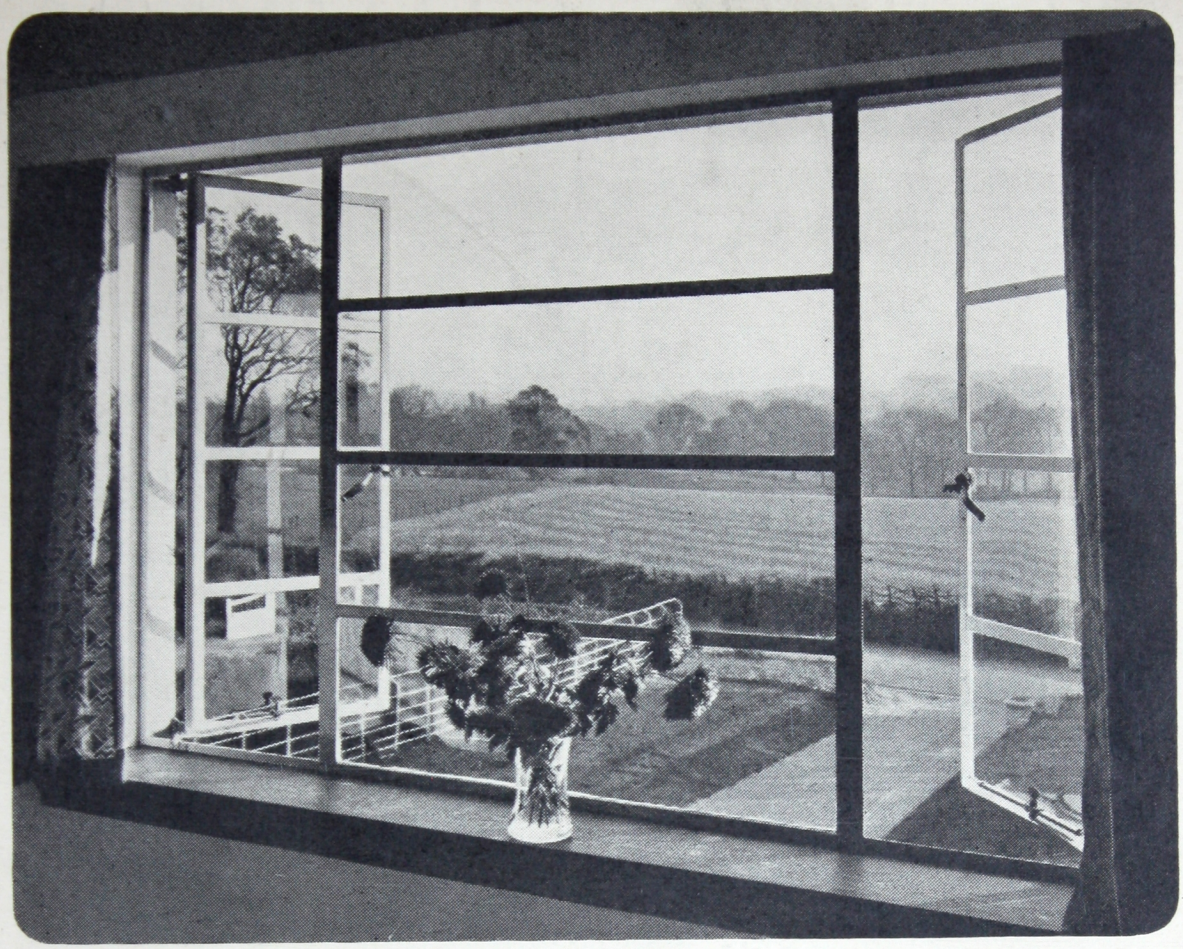


HOPE'S

HOT-DIP GALVANIZED

STANDARD WINDOWS

LIST NO. 230

Revised March 1949

Standard · HOPE'S W

represent the highest interpretation of

Contents

ALL PREVIOUS LISTS CANCELLED

Revised March 1949

TC
TH2275
.H4
1949

Foreword

This catalogue contains the complete post-war range of Standard Metal Windows and Doors for domestic use, as set out in B.S.S. 990 : 1945. Concentration on this limited range has enabled us to adopt stiffer sections than before (see pages 5 and 7), and improved fittings without any corresponding increase in cost.

Certain types in our pre-war range, for which the demand was small, have been dropped; they can still be made to meet customers' special requirements, but at extra cost.

General

HOPE'S Standard Metal Windows and Doors are made of British rolled steel, cold straightened before fabrication. All windows and doors open outwards (except Larder Windows, types NL1, HL1 and L1), and are prepared for glazing from outside. Holes are drilled for curtain rail fittings at head of every window (see page 15).

Fittings are of bronze or aluminium and are interchangeable; all our side hung casements are now hung on a new type of Friction Cleaning Hinge which eliminates any form of stay and leaves the cill clear of obstruction.

For architect-designed houses we recommend that fittings be polished and toned at extra cost; chromium-plated fittings can also be supplied for kitchens, sculleries, bathrooms, etc., at a small extra.

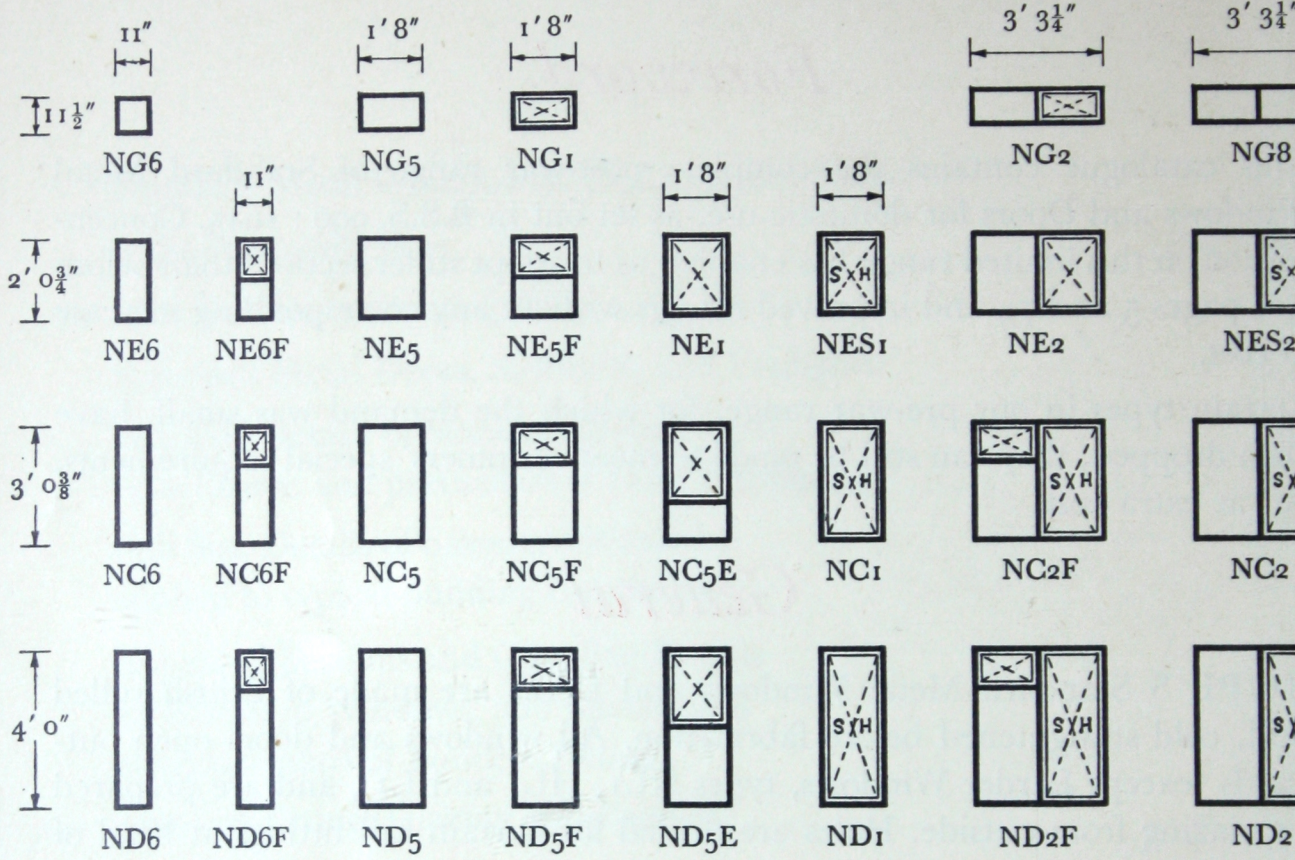
HOPE'S WINDOWS ARE HOT-DIP GALVANIZED, and are despatched unpainted. After fixing, they should be allowed to weather for at least a month before painting.

HOPE'S Pressed Steel 'Cavity' Sub-frames for Standard Metal Windows, as well as external Steel Cills, are fully illustrated on pages 16-18.

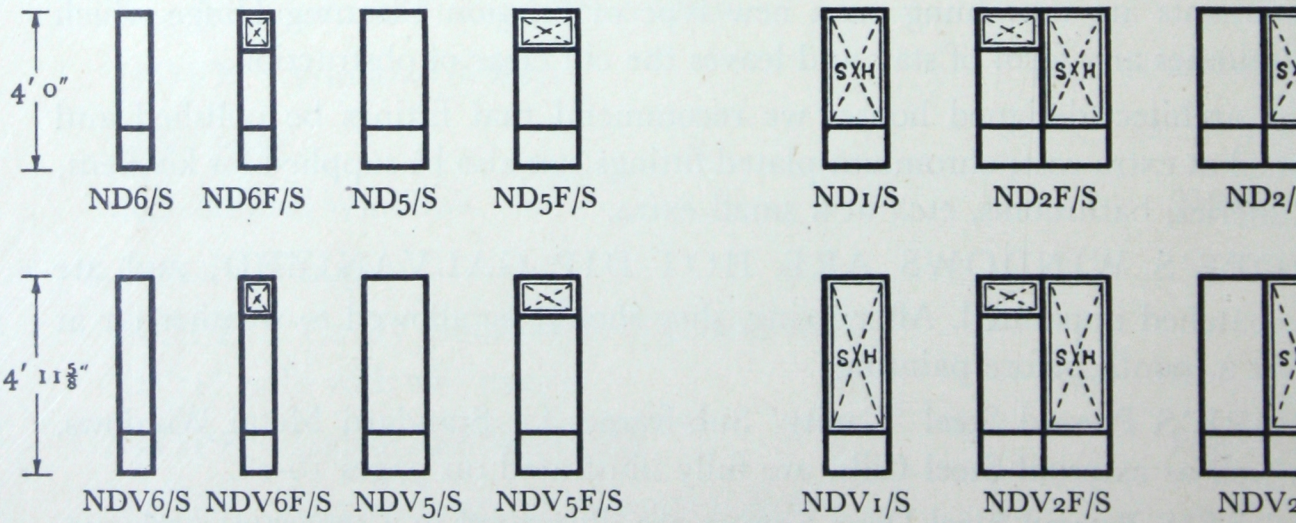
HOPE'S Pressed Steel Door Frames are illustrated in a separate catalogue, List No. 231.

HOPE'S Standard Metal Windows can now be supplied complete in Wood Surrounds.

without Gl



SUB-LIG



WHEN ORDERING:

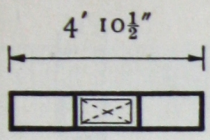
Composite units are obtained by coupling standard units. Mullions and transoms are indicated by vertical and horizontal strokes thus, *as seen from inside.*

State 'Hand' of Side Hung Casements and Doors (*The 'hand' is the hinged side looking from inside.*)

Give full consigning address.

l Glazing Bars

SH denotes side hung casements. Other ventilators (unmarked) are top hung except Larder Window, type HL1, which is bottom hung, to open in.



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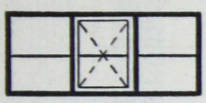
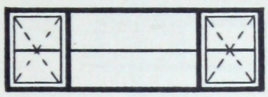


HE3



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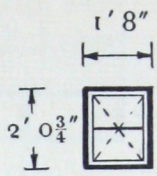
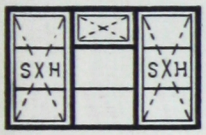


HL1
with or without fly-screen



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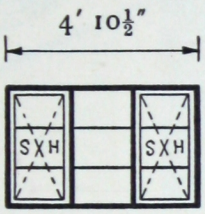
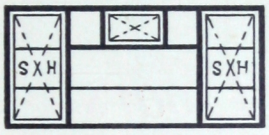


HC4



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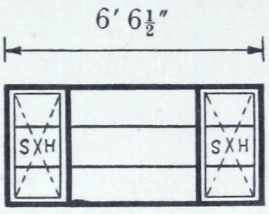

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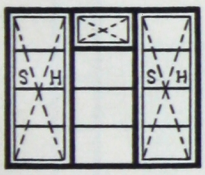

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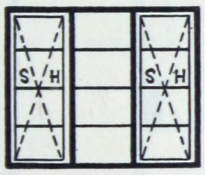

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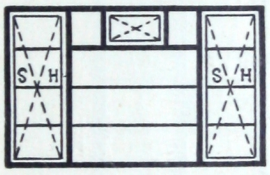

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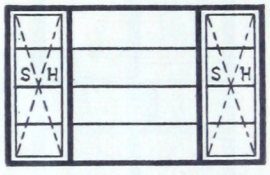
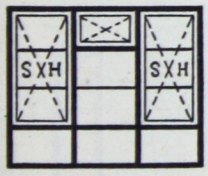
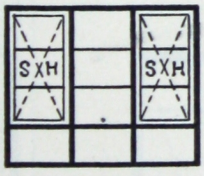


HD11

HT TYPES



HD4F/S



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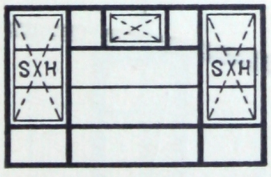

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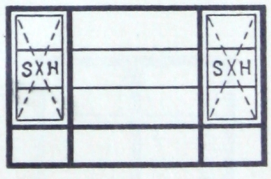

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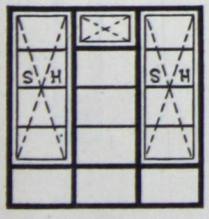

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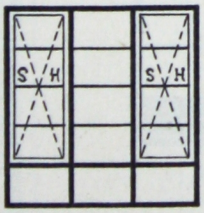

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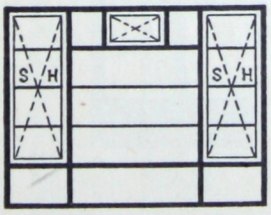

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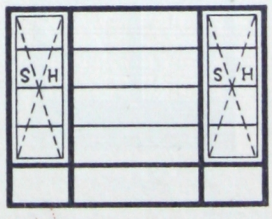


HDV11/S

HE2	HE3
HD2	HD4

State Finish required for Fittings:
Unpolished (no extra), polished or chromium plated.

State if weather bars are required at head.

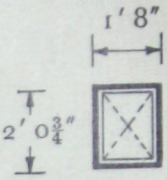
State whether fixing to Brick, Wood, or Concrete.

State whether Putty and Mastic are required.

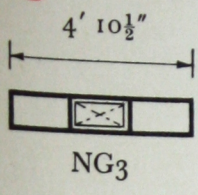
VINDOWS · *Galvanized*

lazing Bars

SH denotes side hung casements.
Other ventilators (unmarked) are top hung, except Larder Window, type NL1, which is bottom hung, to open in.



NL1
with or without fly-screen



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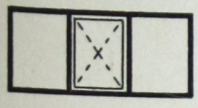

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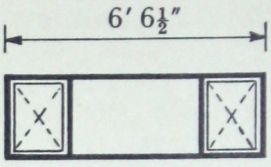

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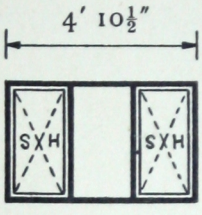

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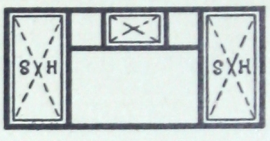
NC4



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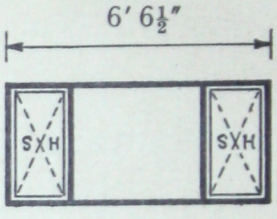

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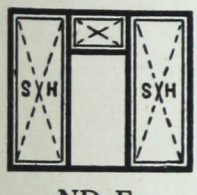

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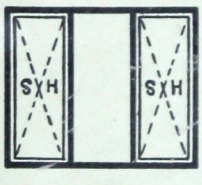

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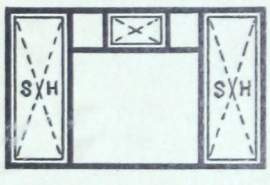

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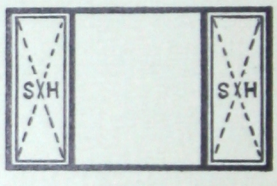
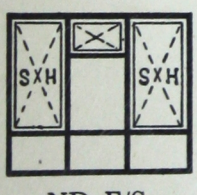
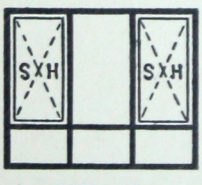


ND11

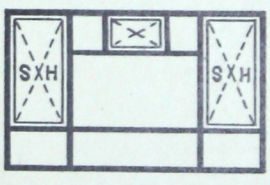
HT TYPES



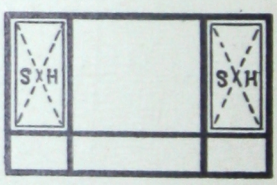
ND4F/S



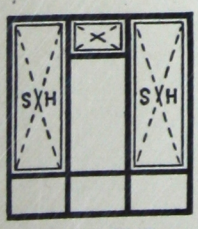
ND4/S



ND11F/S



ND11/S



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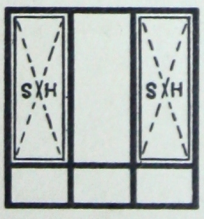

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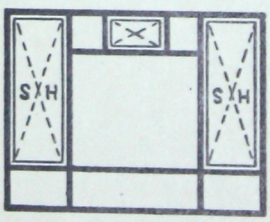

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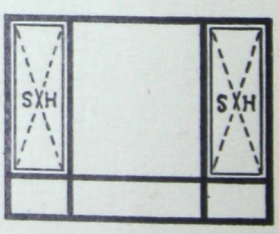


NDV11/S

NE2	NE3
ND2	ND4

State Finish required for Fittings:
Unpolished (*no extra*), *polished or chromium plated.*

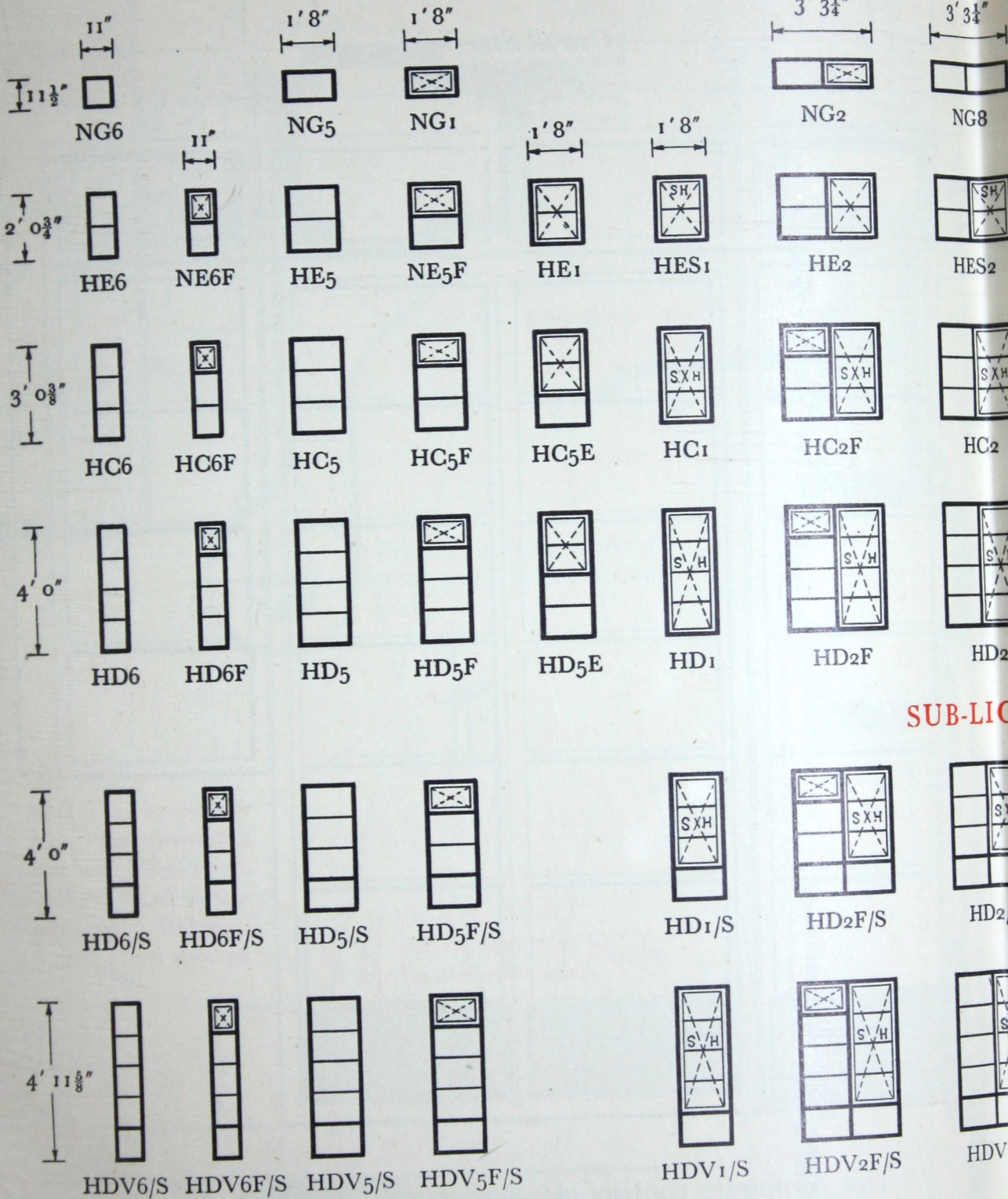
State if weather bars are required at head.

State whether fixing to Brick, Wood, or Concrete.

State whether Putty and Mastic are required.

Standard · HOPE'S WI

with Horizonta



WHEN ORDERING:

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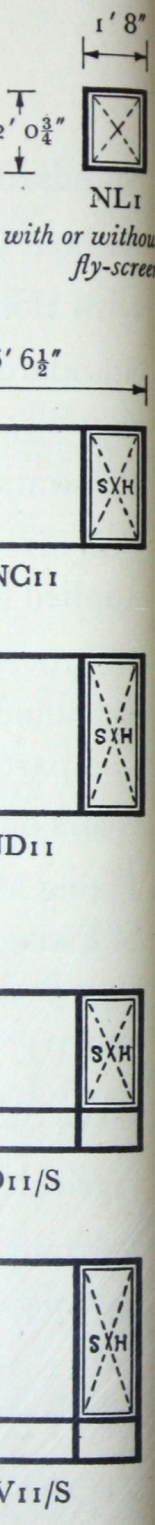
State 'Hand' of Side Hung Casements and Doo (*The 'hand' is the hinged side looking from inside.*)

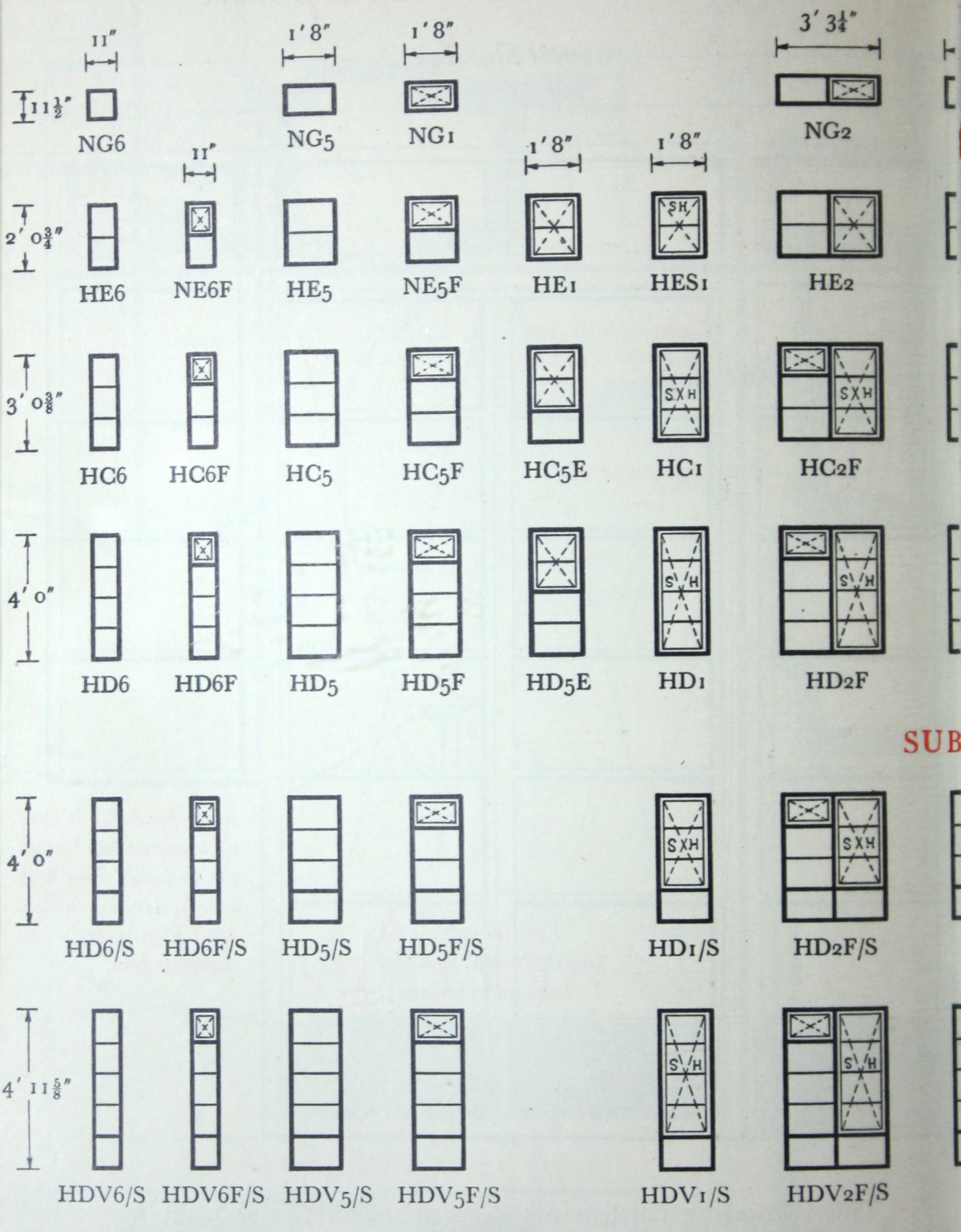
Give full consigning address.

zed

Standard · HOPE'S W

with Horizo





SUB

WHEN ORDERING:

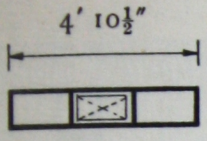
Composite units are obtained by coupling sta units. Mullions and transoms are indicated b tical and horizontal strokes thus, *as seen from*

State 'Hand' of Side Hung Casements and (*The 'hand' is the hinged side looking from inside.*)

Give full consigning address.

Glazing Bars

SH denotes side hung casements.
Other ventilators (unmarked) are top hung except Larder Window, type HL1, which is bottom hung, to open in.



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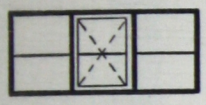
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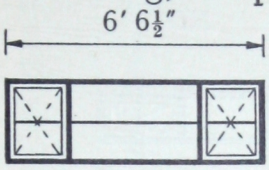
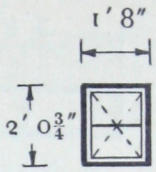
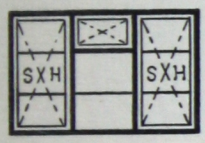


HE11



HL1
with or without fly-screen



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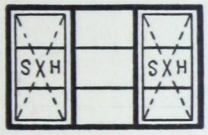

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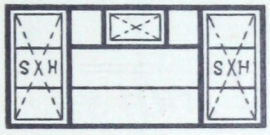
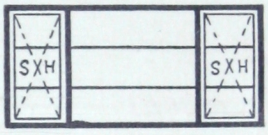
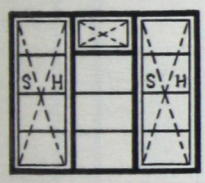


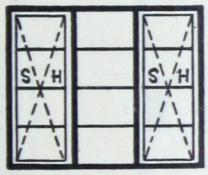
HC11F



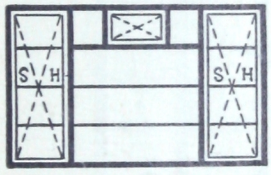
HC11



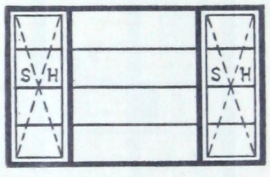
HD4F



HD4

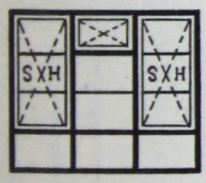


HD11F

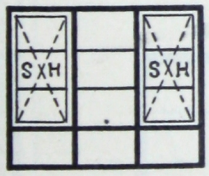


HD11

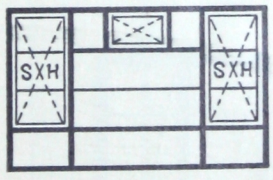
T TYPES



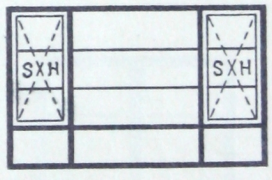
HD4F/S



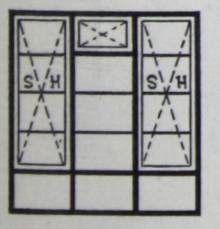
HD4/S



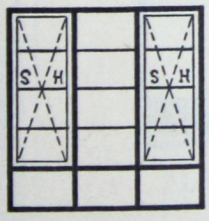
HD11F/S



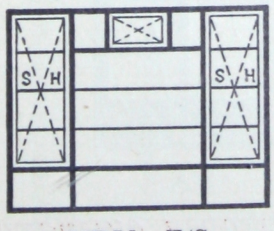
HD11/S



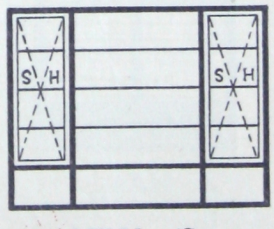
HDV4F/S



HDV4/S



HDV11F/S



HDV11/S

HE2	HE3
HD2	HD4

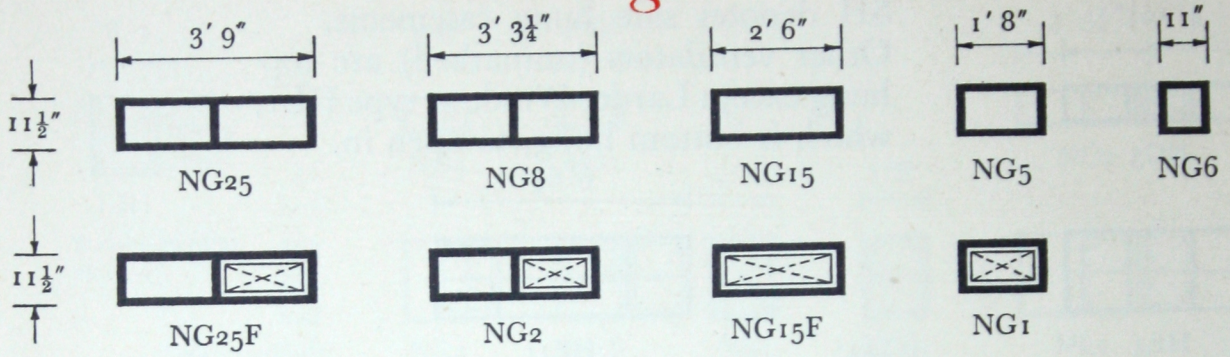
State Finish required for Fittings:
Unpolished (no extra), polished or chromium plated.

State if weather bars are required at head.

State whether fixing to Brick, Wood, or Concrete.

State whether Putty and Mastic are required.

Fanlights

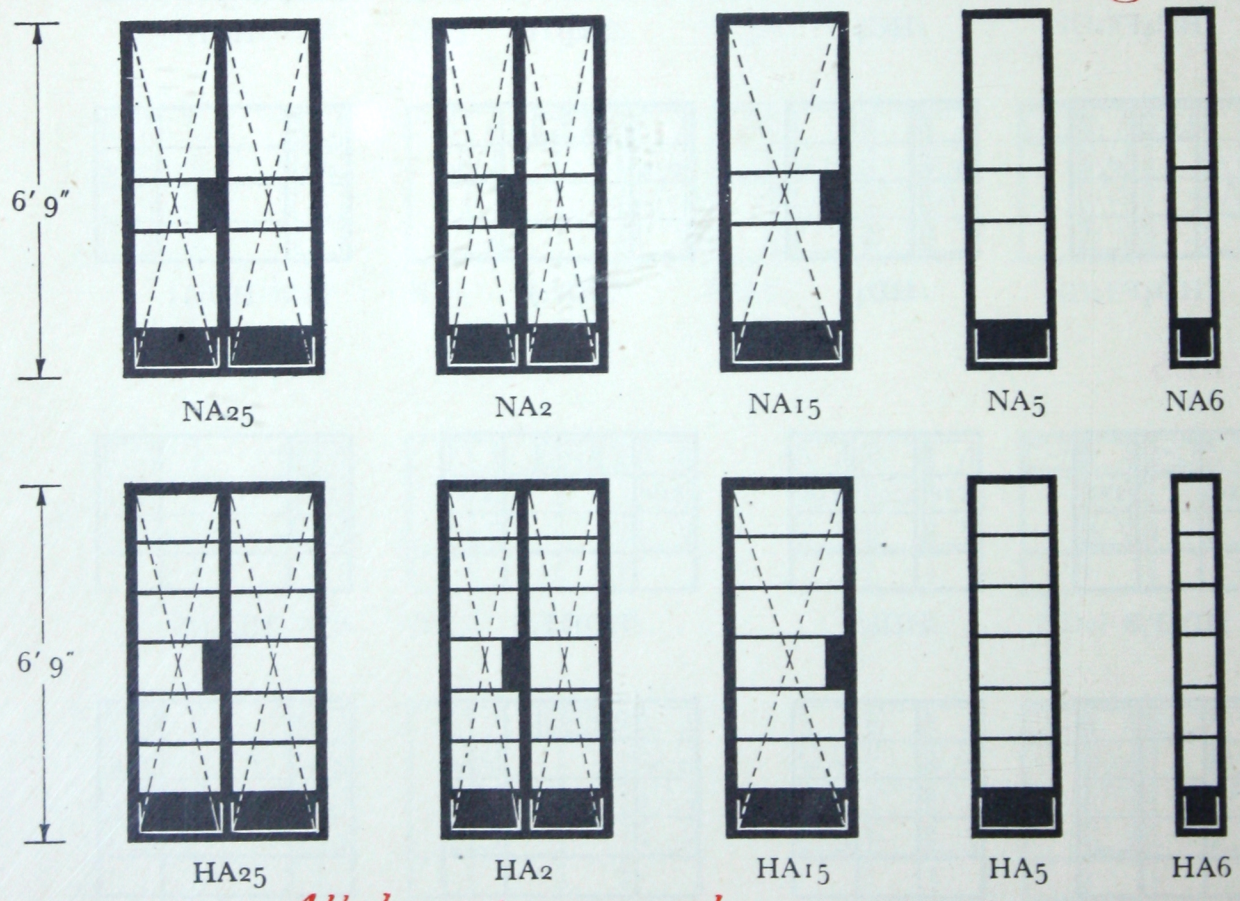


Top Hung Ventilators

Outside Elevations

Doors

Sidelights



All doors open outwards

WHEN ORDERING: Give full consigning address

State 'hand' of single doors NA15 and HA15 *(the 'hand' is the hinged side looking from inside).*

State finish required for fittings: *unpolished (no extra), polished or chromium plated.*

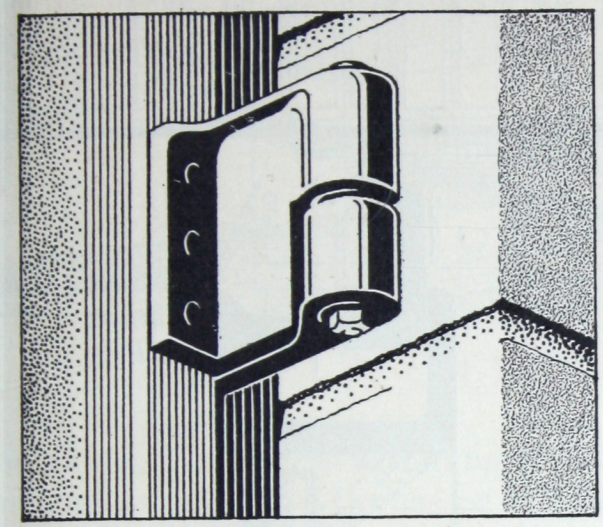
State if weather bars are required at head.

State whether fixing to Brick, Wood or Concrete.

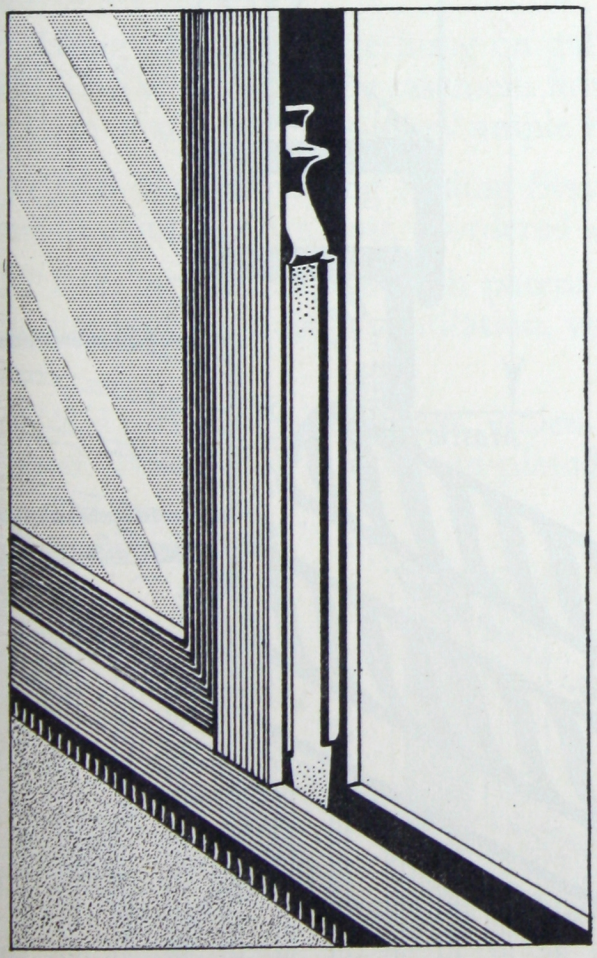
State whether Putty and Mastic are required.

DOOR FITTINGS

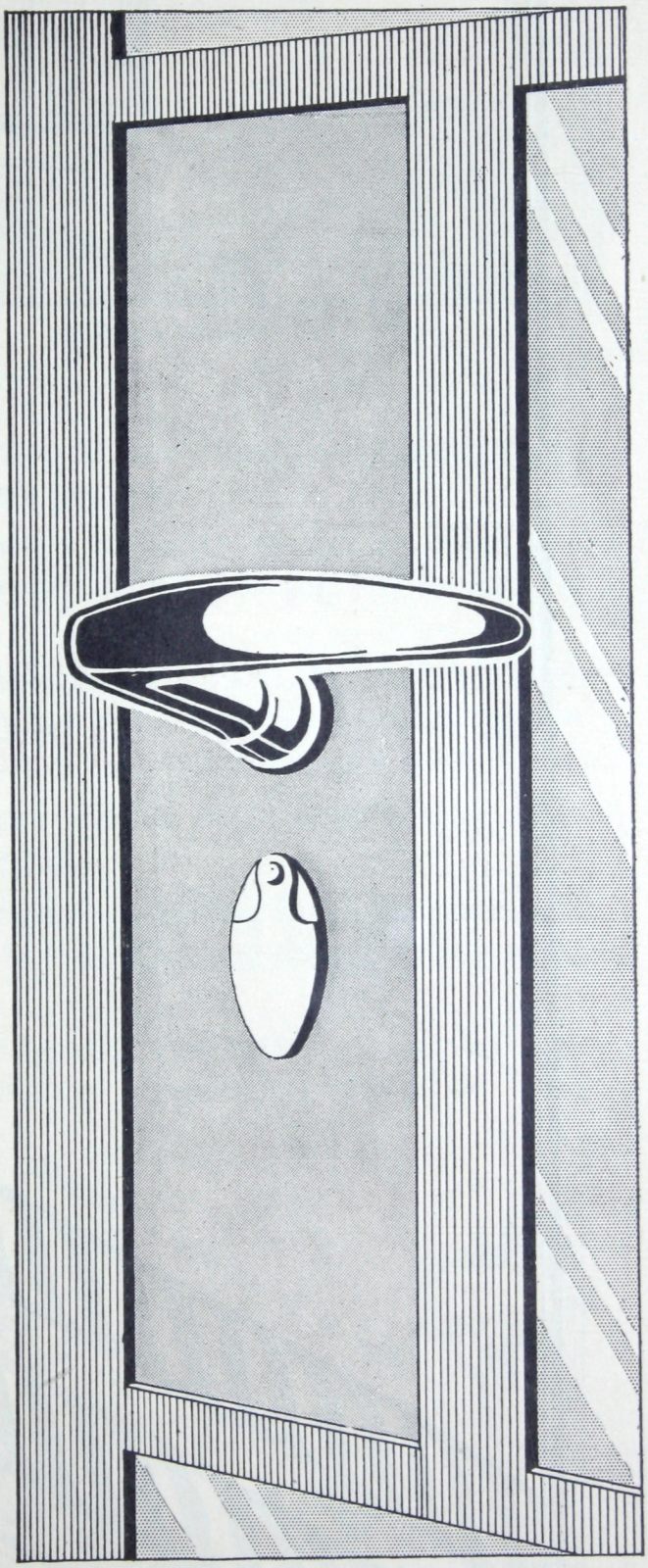
Not to Scale



HOPE'S Projecting Hinges allow doors to be folded back against the wall.

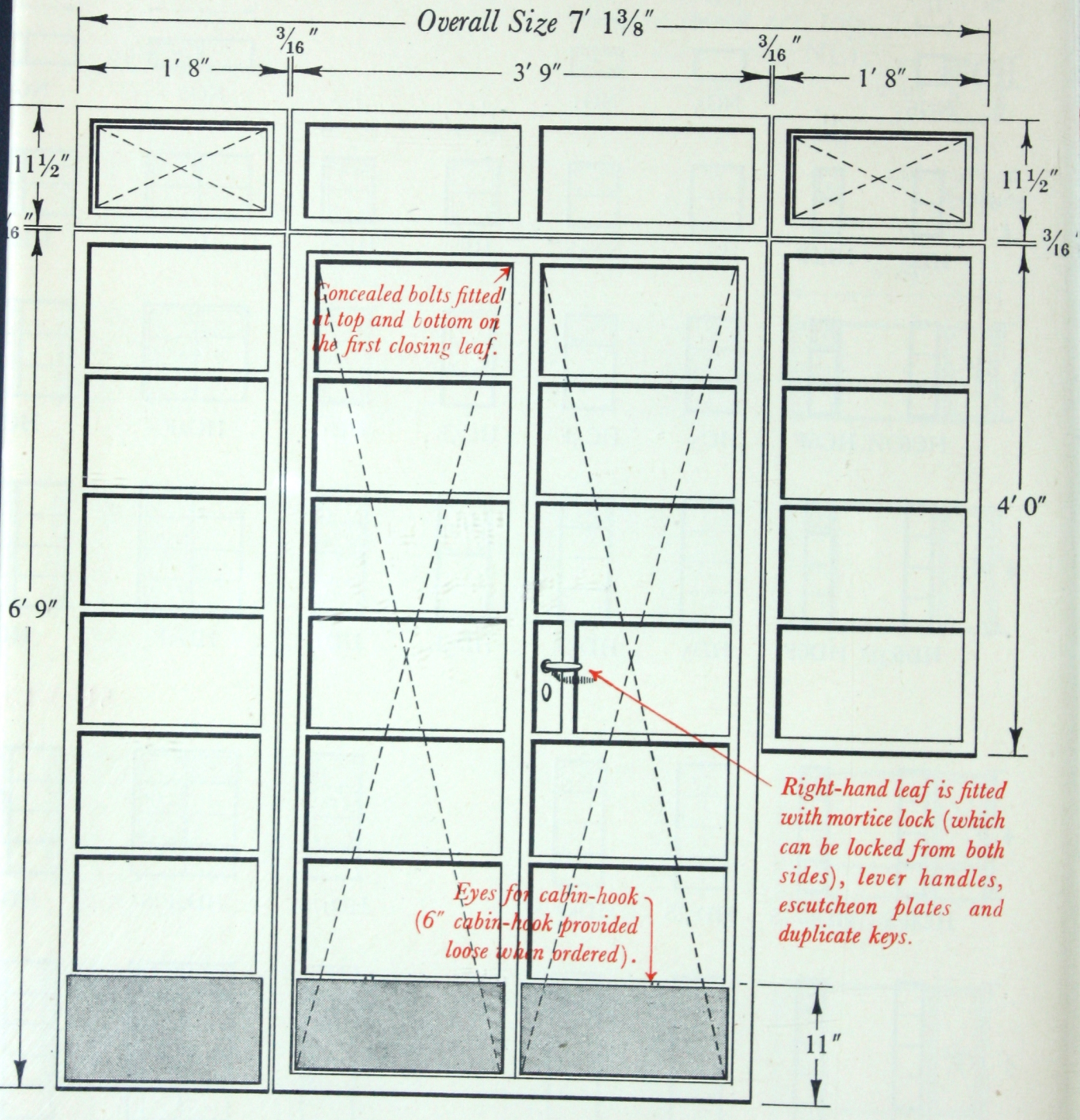


HOPE'S Folding Doors are fitted with concealed bolts at top and bottom on the first closing leaf.



All Standard Doors are fitted with a mortice lock and lever handle and can be locked from both sides.

Typical Door Composite



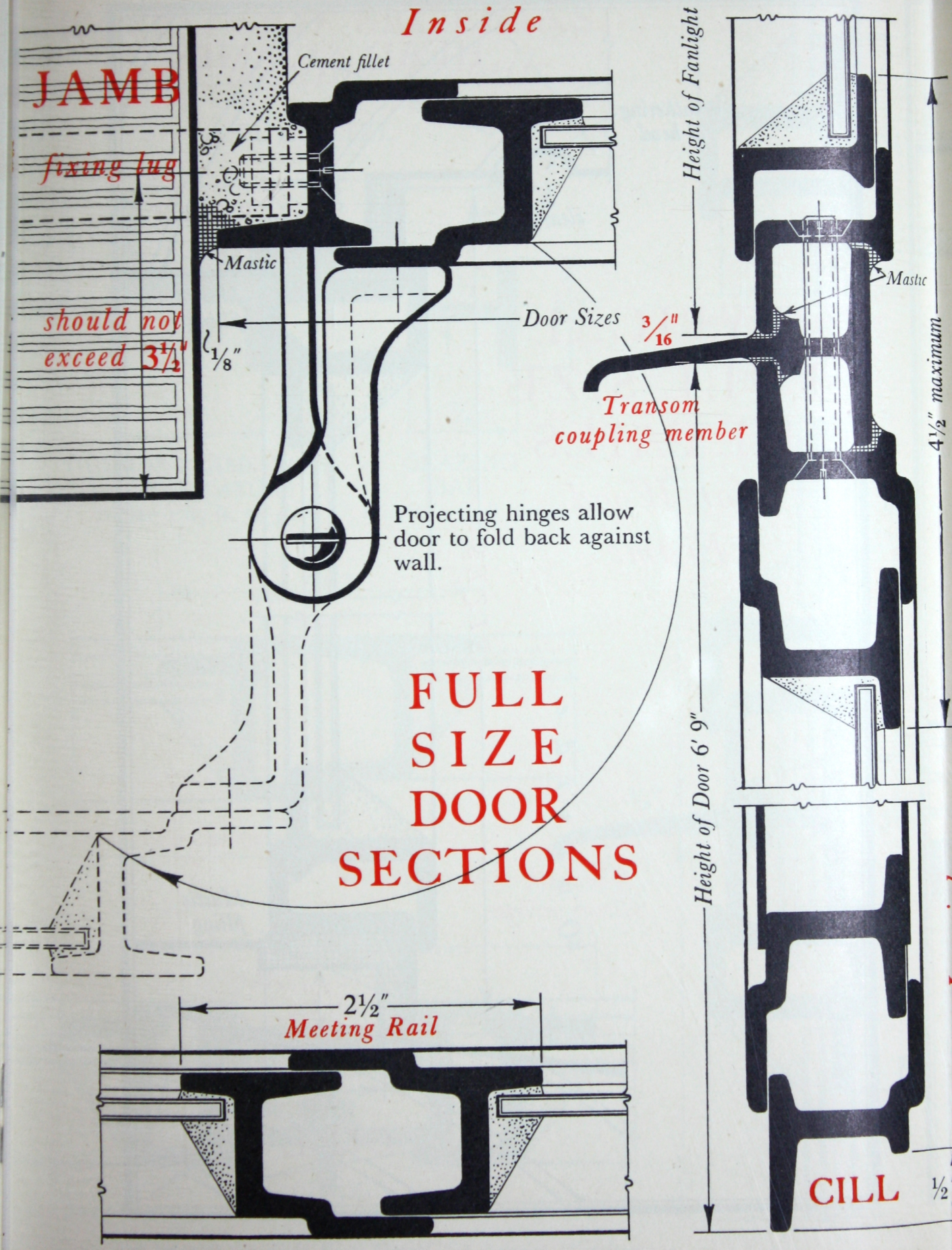
This composite consists of: *Fanlights:* NG1, NG25, NG1.
Sidelights: HA5, HD5.
Door: HA25.

and should be ordered thus:

NG1	NG25	NG1
HA5	HA25	HD5

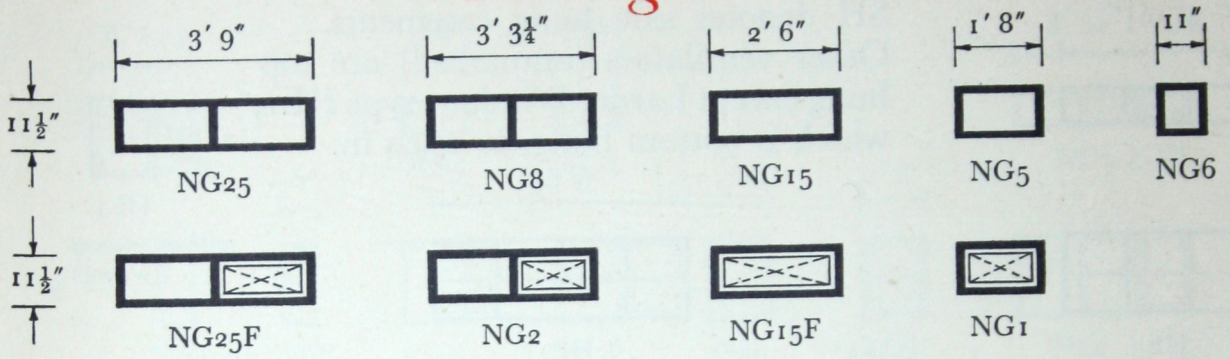
as seen from inside.

Standard · HOPE'S WI



FULL SIZE DOOR SECTIONS

Fanlights

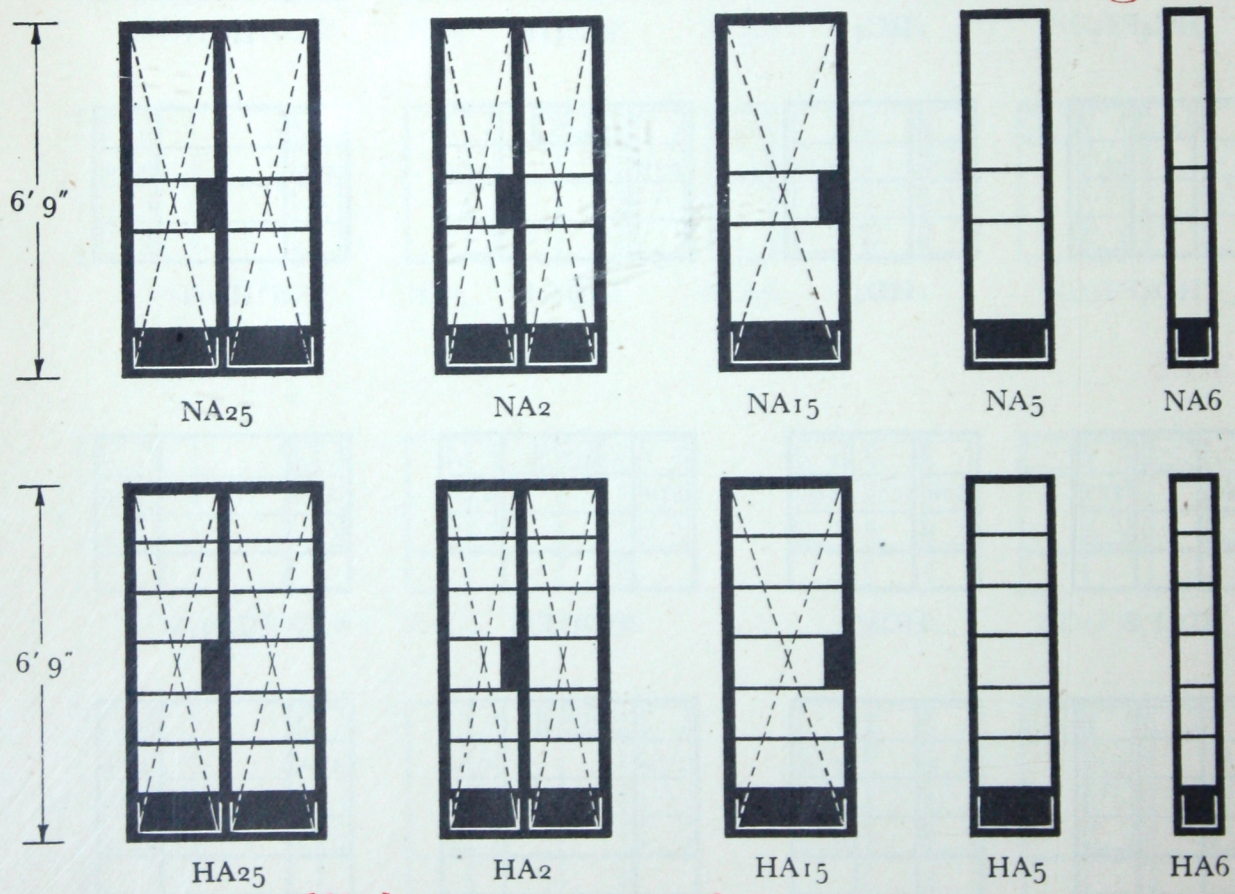


Top Hung Ventilators

Outside Elevations

Doors

Sidelights



All doors open outwards

WHEN ORDERING: Give full consigning address

State 'hand' of single doors NA15 and HA15 (*the 'hand' is the hinged side looking from inside*).

State finish required for fittings: *unpolished* (*no extra*), *polished or chromium plated.*

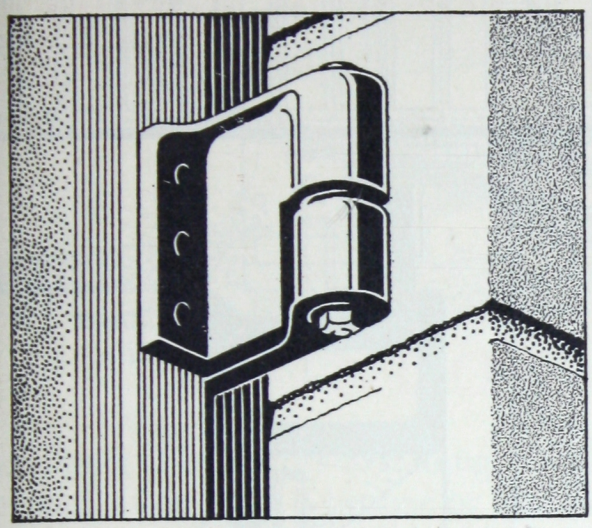
State if weather bars are required at head.

State whether fixing to Brick, Wood or Concrete.

State whether Putty and Mastic are required.

DOOR FITTINGS

Not to Scale



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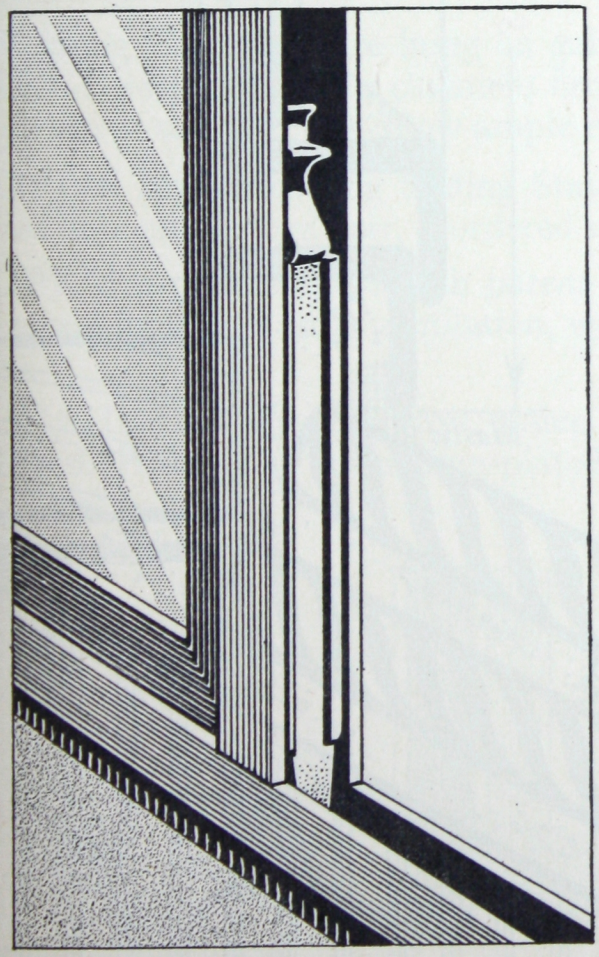

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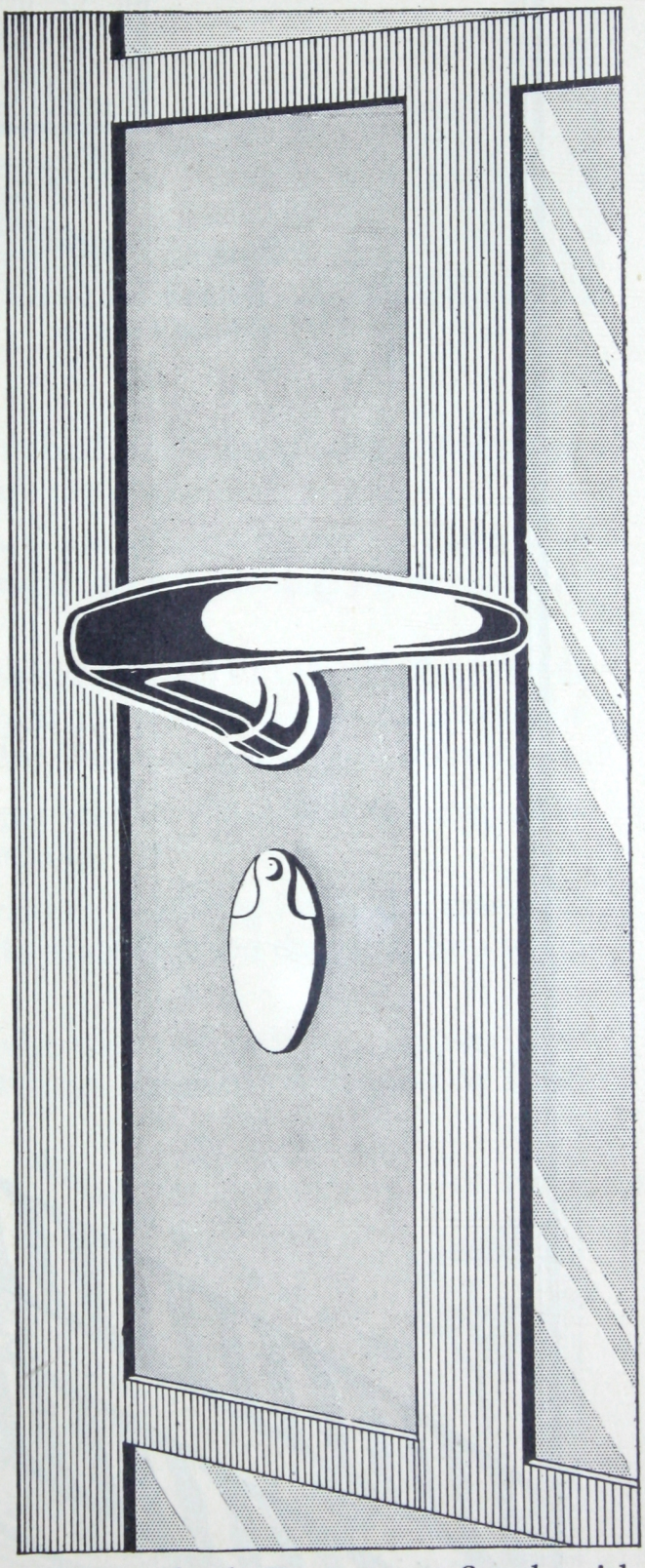
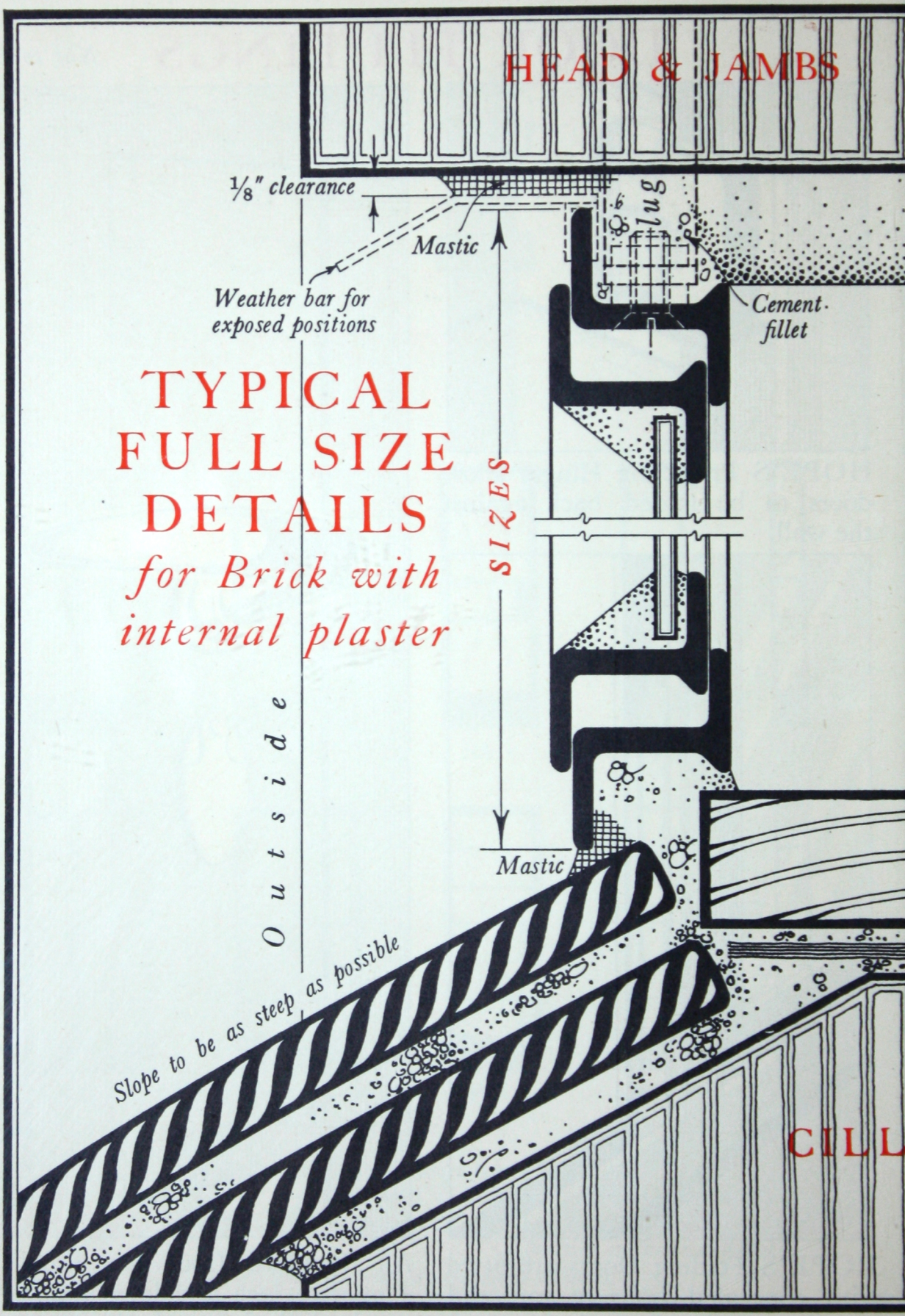
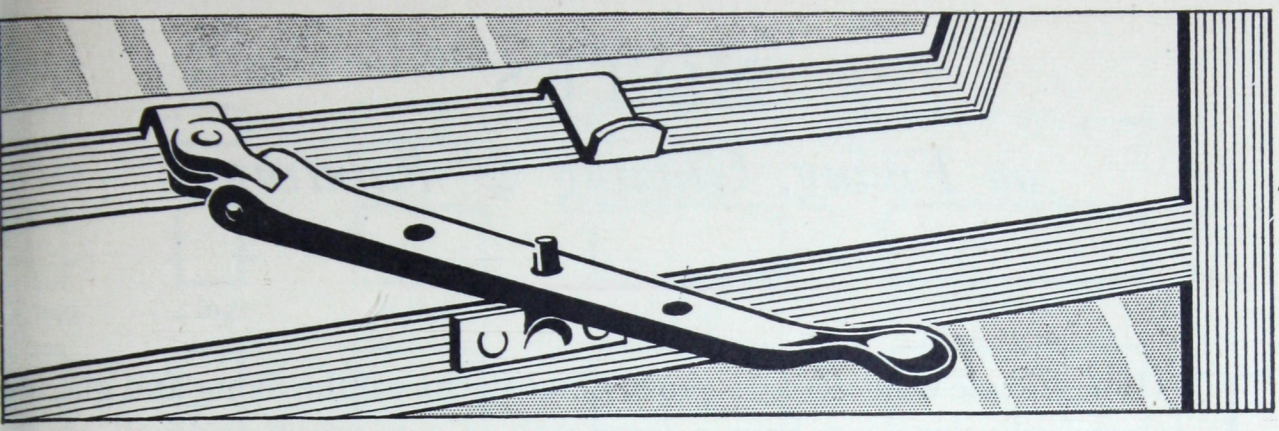


All Standard Doors are fitted with a mortice lock and lever handle and can be locked from both sides.


HEAD & JAMBS
1/8" clearance
Mastic
Weather bar for exposed positions
Plug
Cement fillet
TYPICAL FULL SIZE DETAILS
for Brick with internal plaster
SIZES
Outside
Mastic
Slope to be as steep as possible
CILL



WINDOW FITTINGS

Top Hung Ventilators are hung on galvanized steel hinges with sherardized pins and fitted with a bronze or aluminium peg stay.

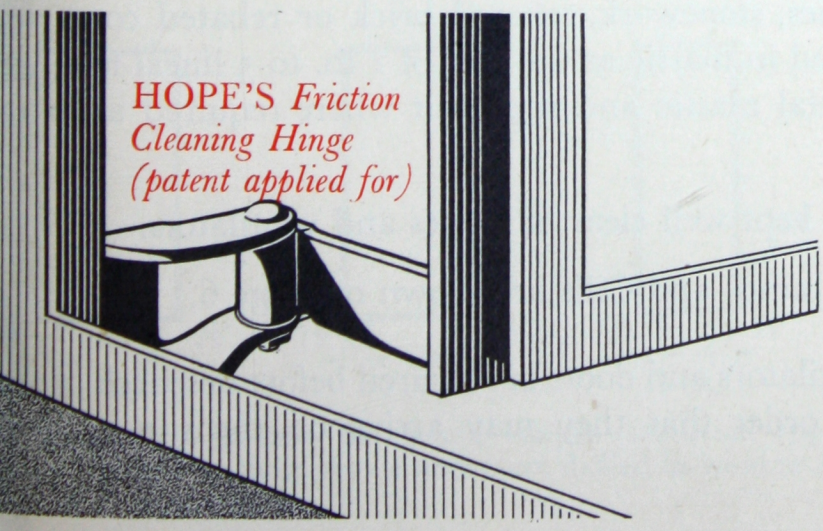
Bottom Hung Ventilators (larder windows) are fitted with spring catch and side arm which may be lifted to release ventilators for cleaning. Fly-screens are supplied on request.

Side Hung Casements are hung on galvanized FRICTION CLEANING HINGES which hold the casement firmly in any position without the need for any form of stay and also allow ample room for cleaning the glass from inside.

HOPE'S Non-projecting Sliding Stay can still be fitted to side hung casements at a small extra cost, if ordered specially.

HOPE'S 2-point handle with patent friction mounting holds the casement open one inch for a little ventilation, works smoothly and does not drop when open.

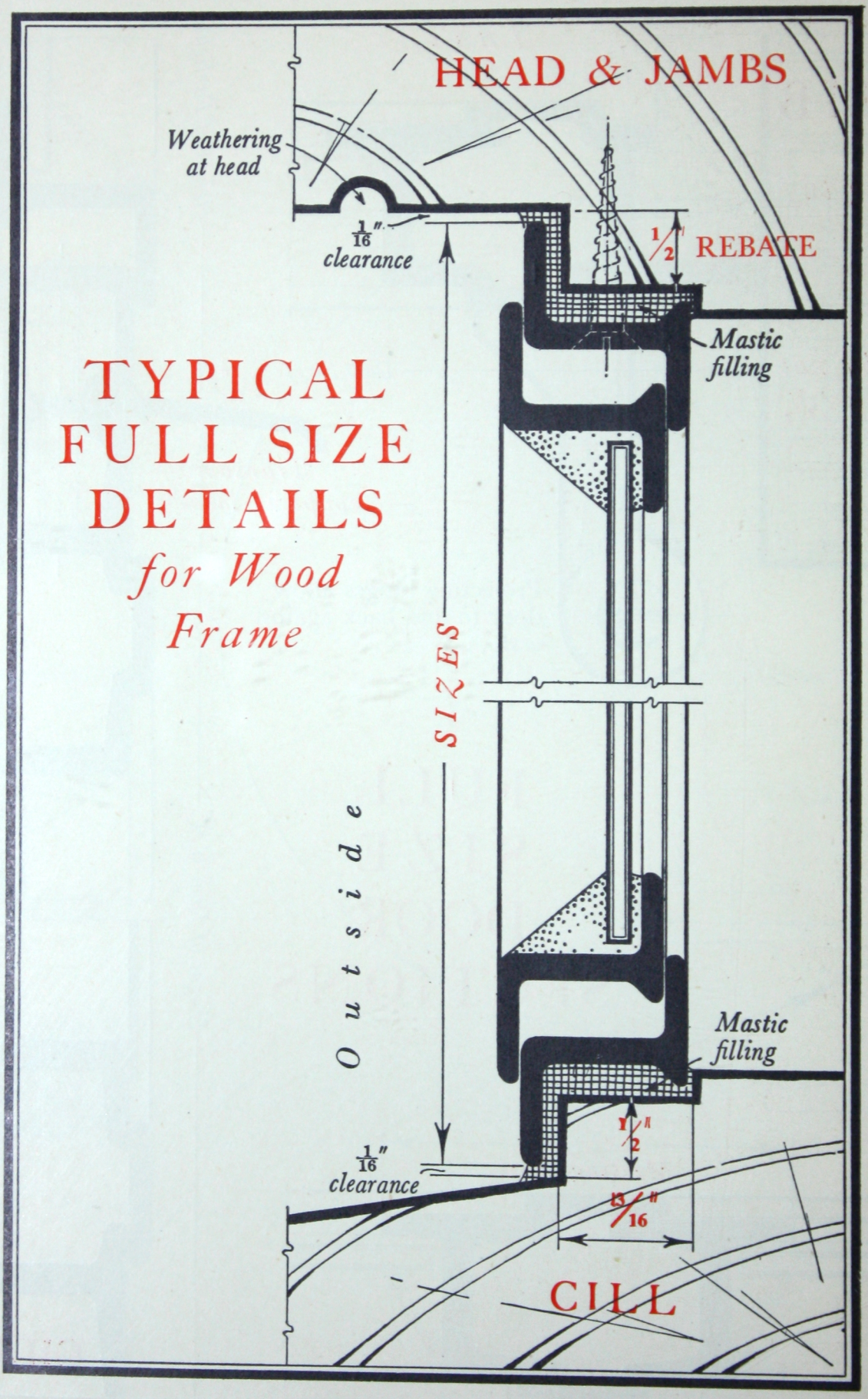
FINISH: Handles and stays, unless otherwise ordered, are supplied unpolished. Polished or chromium-plated fittings supplied on request at small extra cost.



HOPE'S *Friction Cleaning Hinge (patent applied for)*

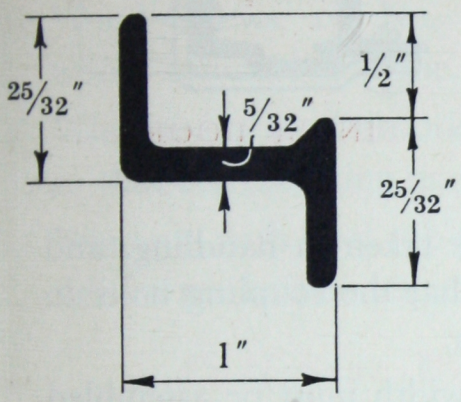
Patent No. 563580

HOPE'S *2-point Handle*

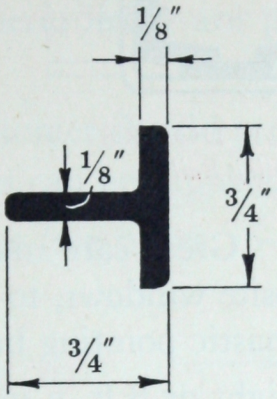

HEAD & JAMBS
Weathering at head
1/16" clearance
1/2" REBATE
Mastic filling
TYPICAL FULL SIZE DETAILS for Wood Frame
Outside SIZES
Mastic filling
1/2"
1/16" clearance
13/16"
CILL

IMPROVED SECTIONS *and Coupling Details*

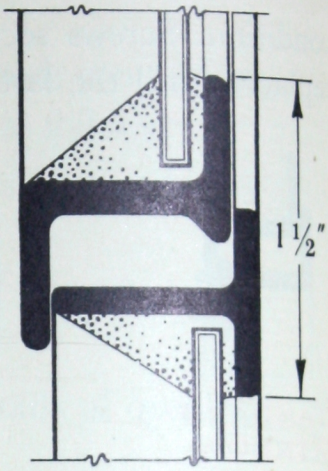
FULL SIZE



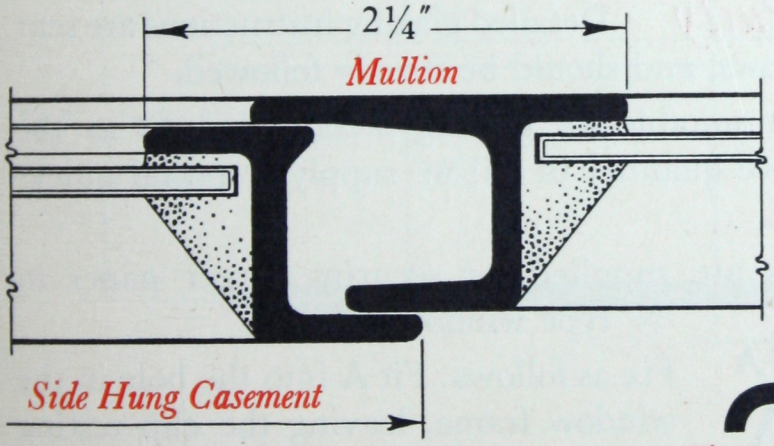
OUTSIDE FRAME BARS *and* VENTILATORS
Weight: 1·03 lb. per ft.



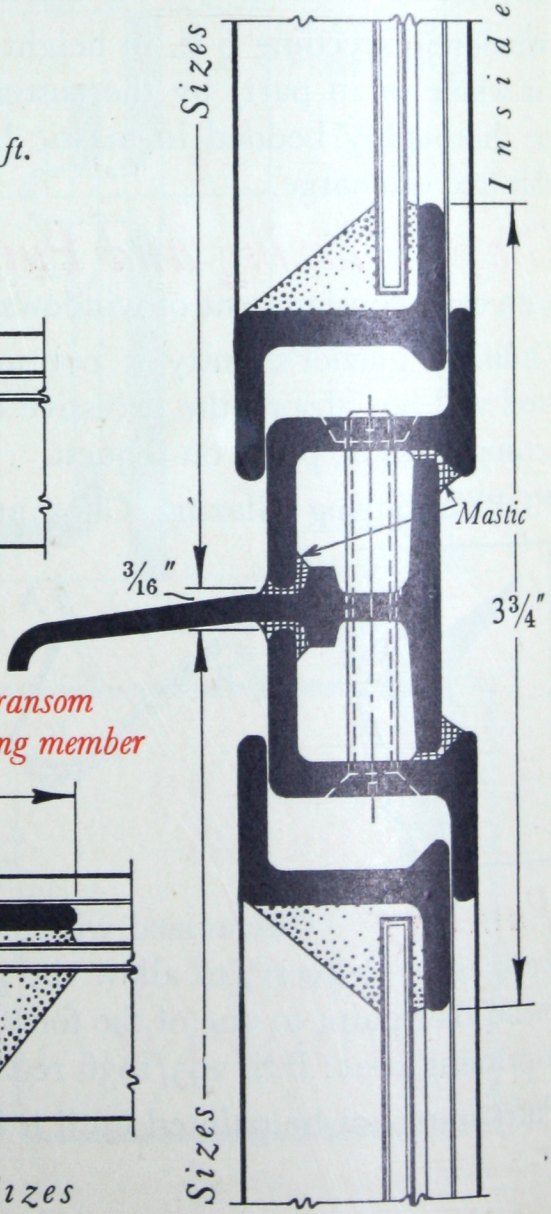
GLAZING BAR
Weight: 0·59 lb. per ft.



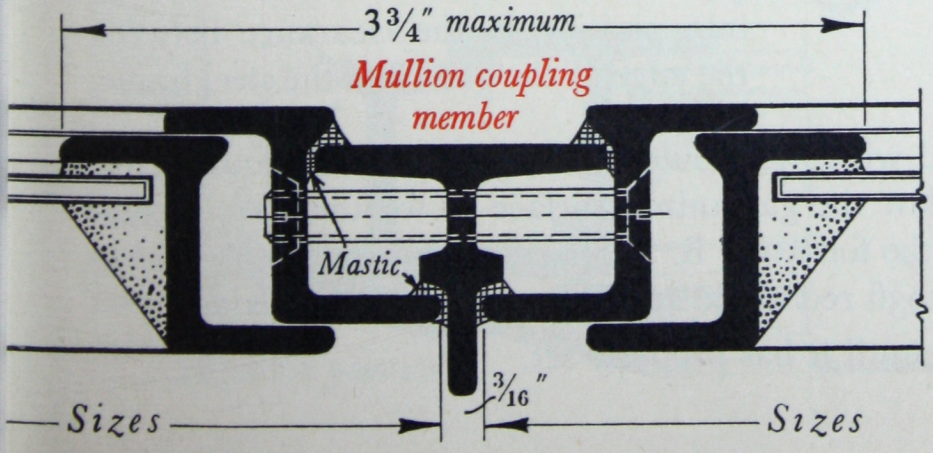
Section through lower Rail of Top Hung in 'F' types



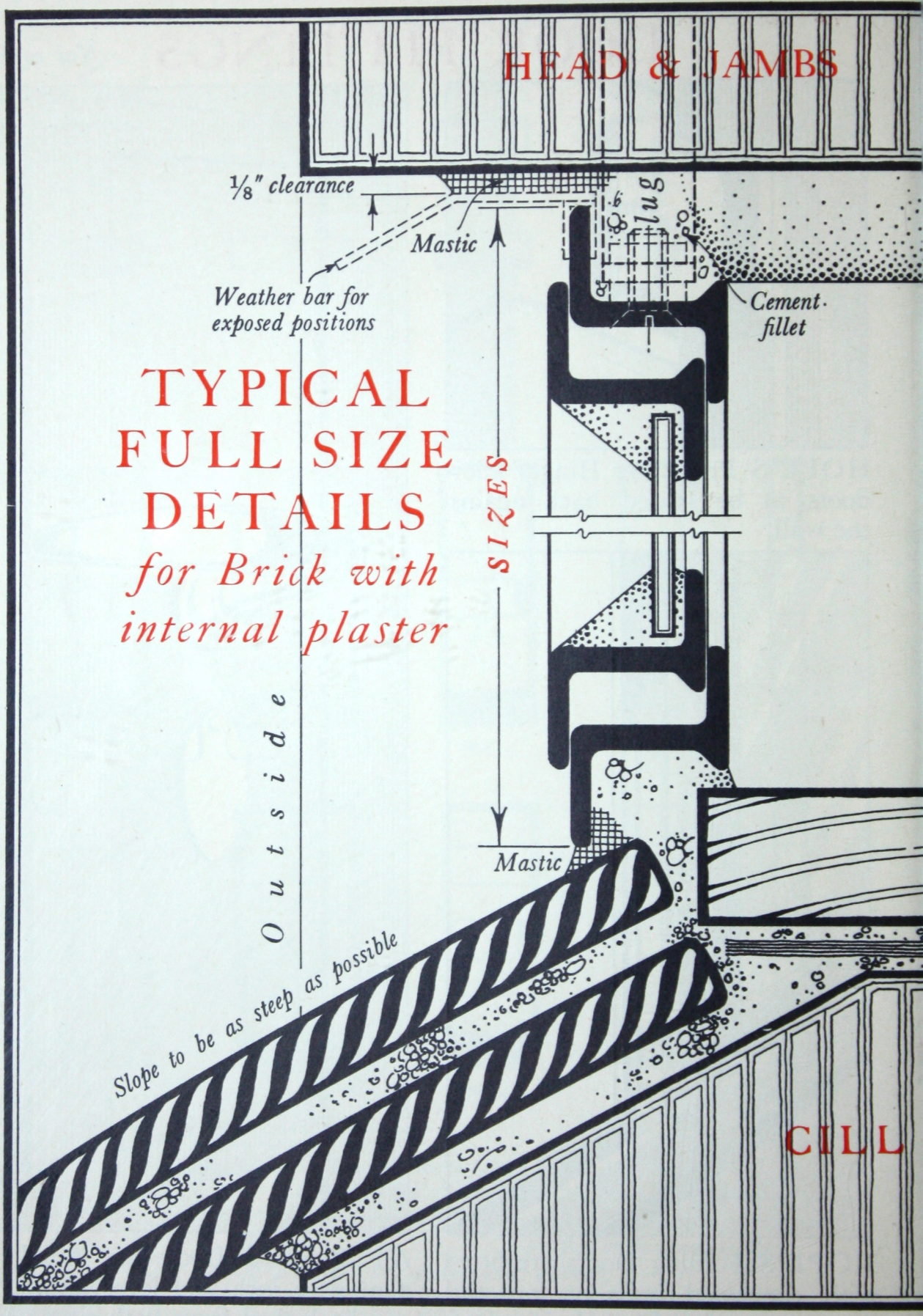
Side Hung Casement

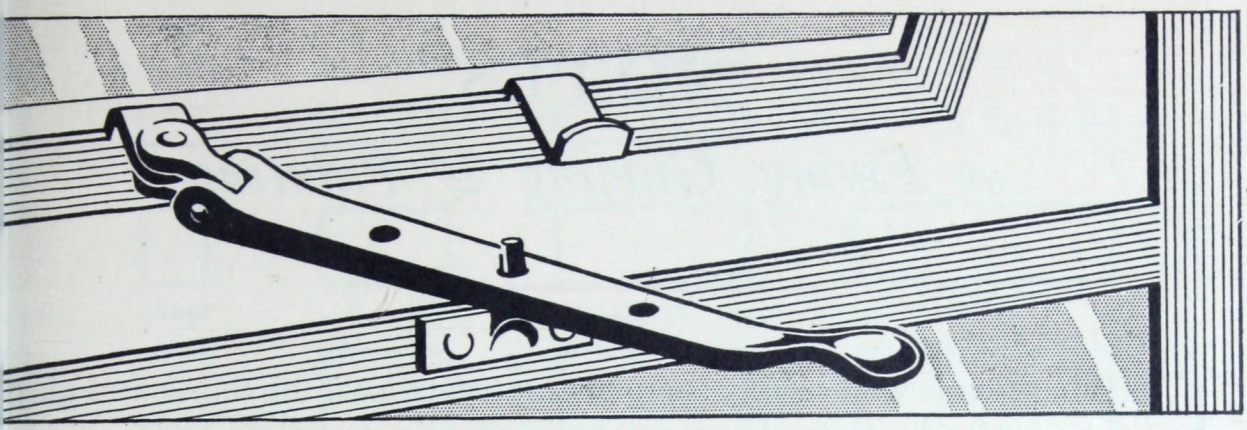


Transom coupling member



See page 9 for Full Size Detail for Larder Window


HEAD & JAMBS
1/8" clearance
Mastic
Weather bar for exposed positions
Plug
Cement fillet
TYPICAL FULL SIZE DETAILS
for Brick with internal plaster
SIZES
Outside
Mastic
Slope to be as steep as possible
CILL



WINDOW FITTINGS

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OPE'S Non-projecting Sliding Stay can still be fitted to side hung case-nts at a small extra cost, if ordered specially.

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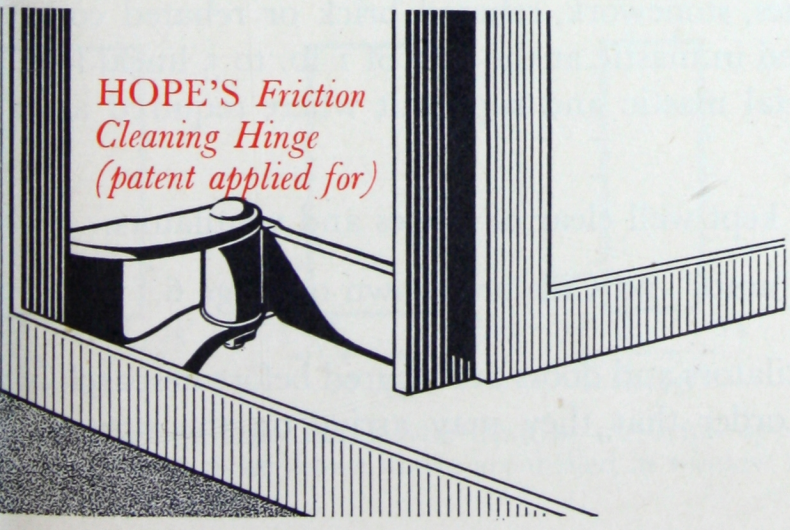
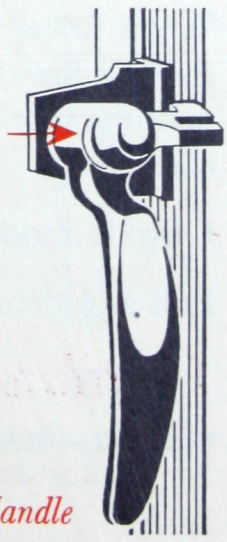
NISH: Handles and stays, unless otherwise ordered, are supplied un-lished. Polished or chromium-plated fittings supplied on request at small ra cost.



HOPE'S *Friction Cleaning Hinge (patent applied for)*

Patent No. 563580



HOPE'S *2-point Handle*

NOTES

on Fixing, Glazing & Painting

THE best made windows may prove unsatisfactory if the fixing and glazing is carelessly done; we have a large staff of outworkers and will gladly carry out this work in any part of the country.
Where customers prefer to fix and glaze with their own labour we would respectfully urge them to insist on the following precautions.

Handling and Storage Galvanized Windows may be stored in the open without detriment; they must, however, be kept clean and free from mud, plaster or cement. They should be stacked vertically on edge on level battens, with hinges and fittings clear of one another.

Fixing Whenever possible fixing of windows should be postponed until rougher trades have left the site. If they are to be built in, particular care must be taken to see that they are not damaged by scaffold boards placed on the cills or on the glazing bars.

Windows must be secured dead plumb and level in the openings and free from twist. Special care should be taken with metal doors.

When fixing to straight brickwork or concrete the channels of the outer frames must be well filled with a continuous fillet of 3 to 1 cement.

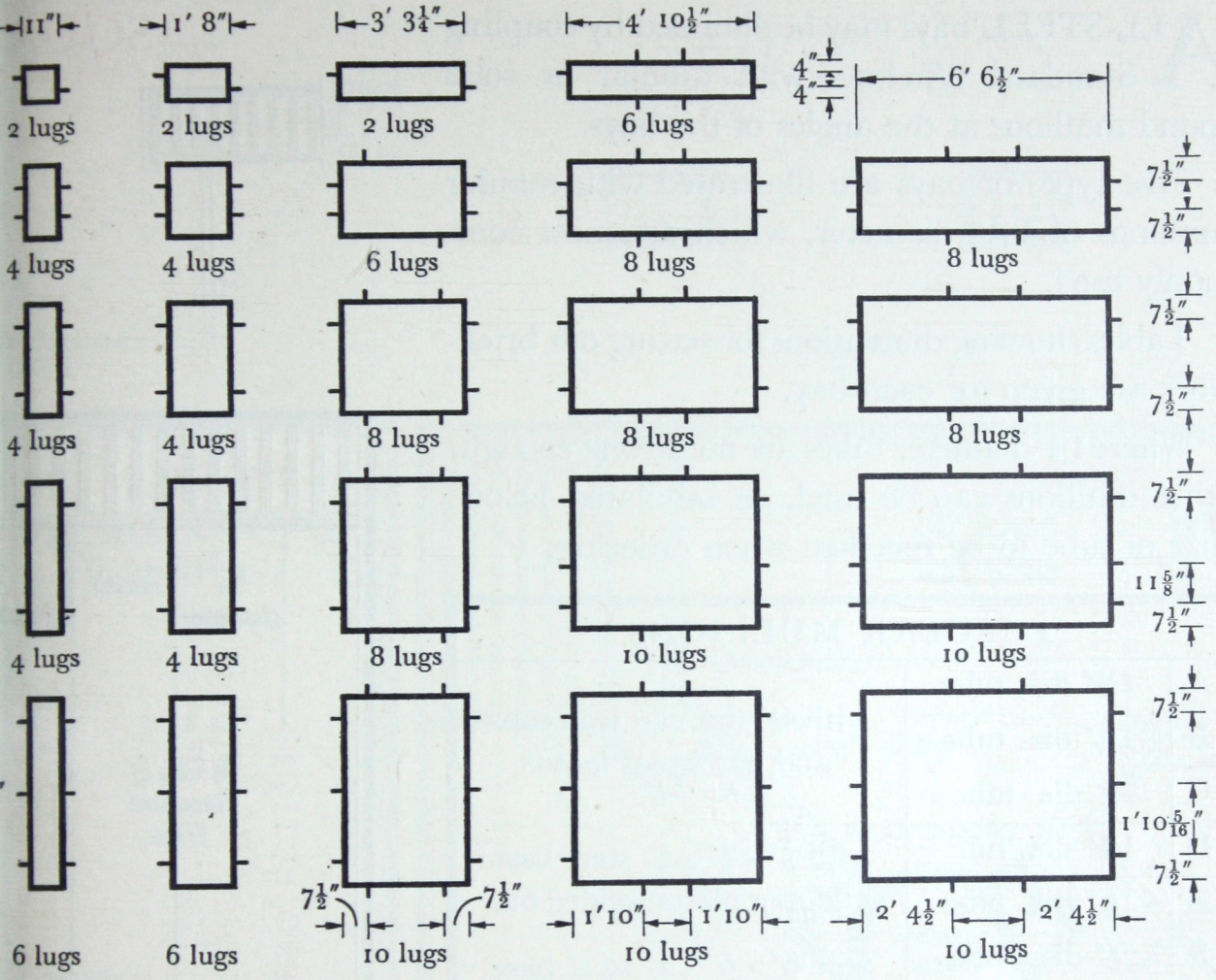
When fixing to wood frames, stonework, rebated brick or rebated concrete, the windows must be bedded in mastic at the rate of 1 lb. to 5 lineal feet; we manufacture our own special mastic and supply it where required at extra cost.

Outside rendering must be kept well clear of hinges and ventilators.

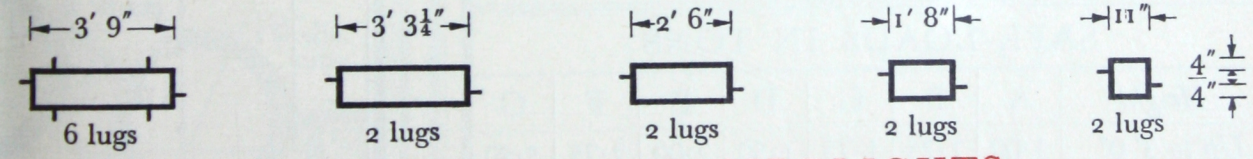
Full size details of Heads, Jambs and Cills are shown on page 6.

Ventilators All ventilators and doors are secured before despatch in the manner shown below, in order that they may arrive on the site in good

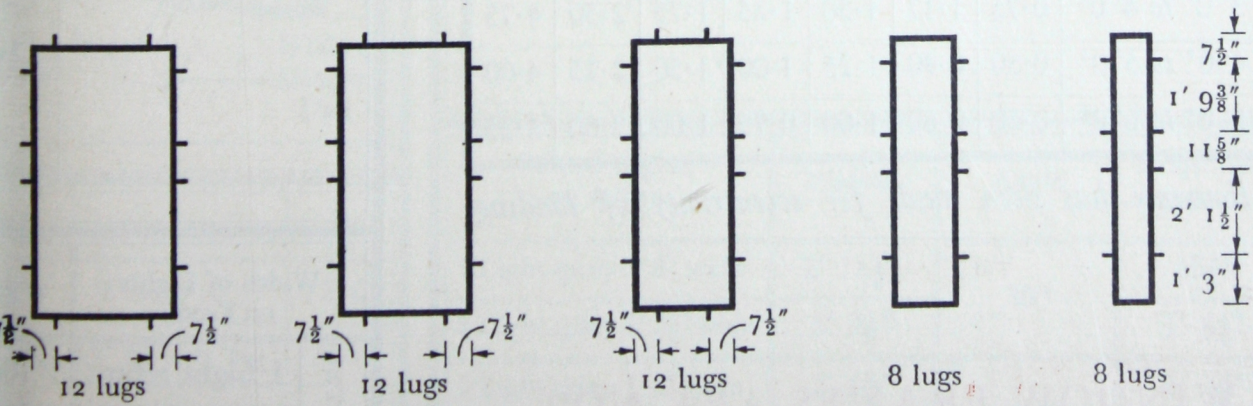
LUGS FOR WINDOWS



LUGS FOR FANLIGHTS



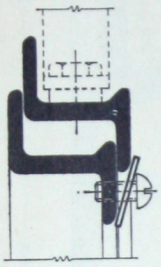
LUGS FOR DOORS AND SIDELIGHTS



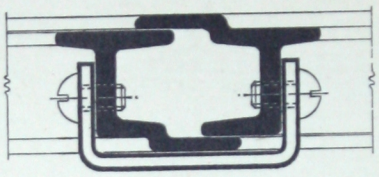
e above diagrams show fixing hole centres; see detail opposite for actual lug positions. ditional holes to those shown above are drilled in window frames, and should be filled in h mastic when fixing.

condition. Screws securing doors must be removed for fixing but should be replaced until the last moment before glazing.

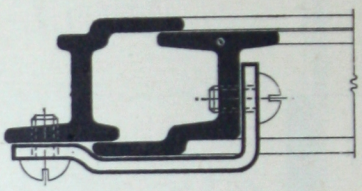
HALF FULL SIZE DETAILS



STANDARD WINDOW



DOUBLE DOORS
Meeting Rail



SINGLE DOORS

Composite Windows

Great care must be taken in handling, and especially in unpacking composite windows, to see that the coupling bolts do not become strained and the mastic pointing broken.

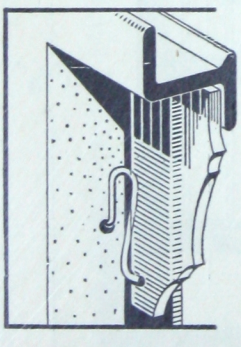
Windows exceeding 6 ft. in height or 8 ft. 3 in. in width must be assembled (in whole or in part) by the customer on the site; the coupling joints must be thoroughly bedded in mastic before assembly and we supply mastic for this free of charge.

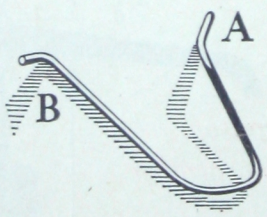
Glass, Glazing and Putty

Detailed glazing instructions are sent with each consignment of windows, and should be strictly followed.

Ordinary glazier's putty is not suitable for glazing metal windows as the steel will not absorb the excessive quantity of oil; we supply a special quick-setting metallic putty on request.

HOPE'S Spring Glazing Clips are supplied for securing larger panes in 'N' type windows.





Fix as follows: Fit A into the hole in the window frame, leaving the clip resting on the glass. Press portion B along the glass towards the frame until it springs into position in the clearance between the edge of the glass and the steel frame.

Painting

Galvanized windows should not be painted until four or five weeks after delivery, to allow the galvanized surface to weather. We recommend that paint to one of the following B. S. Specifications should be used as a priming coat: B.S. 295/1936 red oxide and B.S. 278/1936 zinc oxide.

Putty must not be painted until it has properly set.

Fixing Materials

When ordering, state whether fixing to brickwork, wood, concrete or steel, when the appropriate materials will be provided, as follows:

Lugs, slotted and reversible, with sherardized screws and nuts, are provided where windows are fixed direct to masonry.

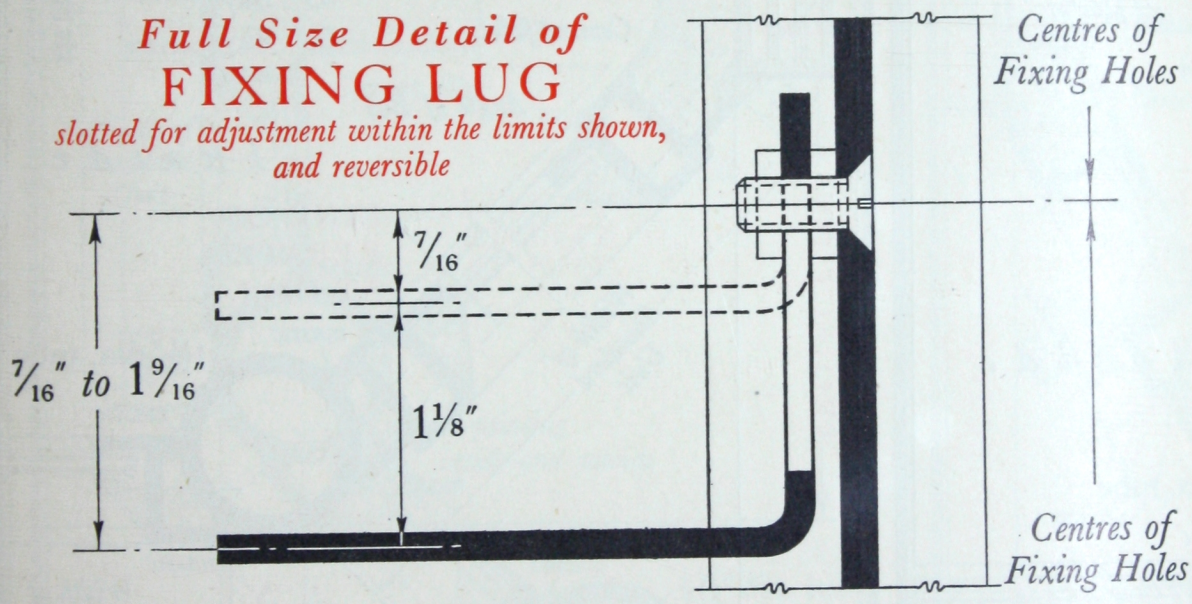
Wood Screws, $1\frac{1}{4}$" No. 10 sherardized, are provided, when fixing to wood, concrete or stone.

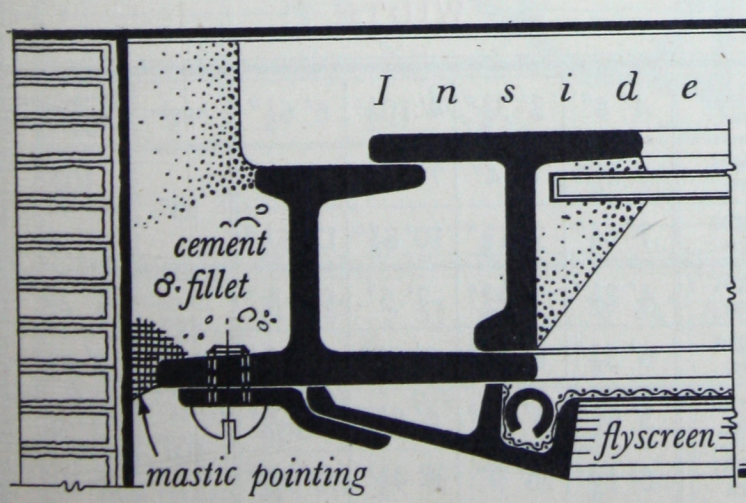
When fixing to steelwork, customer should provide details of openings so that correct fixing materials can be supplied.

Windows with steel sub-frames (see pages 16-17) are screwed into the sub-frames before despatch.

Full Size Detail of FIXING LUG

slotted for adjustment within the limits shown, and reversible





Full Size Detail for LARDER WINDOW

NOTES

on Fixing, Glazing & Painting

THE best made windows may prove unsatisfactory if the fixing and glazing is carelessly done; we have a large staff of outworkers and will gladly carry out this work in any part of the country.
Where customers prefer to fix and glaze with their own labour we would respectfully urge them to insist on the following precautions.

Handling and Storage Galvanized Windows may be stored in the open without detriment; they must, however, be kept clean and free from mud, plaster or cement. They should be stacked vertically on edge on level battens, with hinges and fittings clear of one another.

Fixing Whenever possible fixing of windows should be postponed until rougher trades have left the site. If they are to be built in, particular care must be taken to see that they are not damaged by scaffold boards placed on the cills or on the glazing bars.

Windows must be secured dead plumb and level in the openings and free from twist. Special care should be taken with metal doors.

When fixing to straight brickwork or concrete the channels of the outer frames must be well filled with a continuous fillet of 3 to 1 cement.

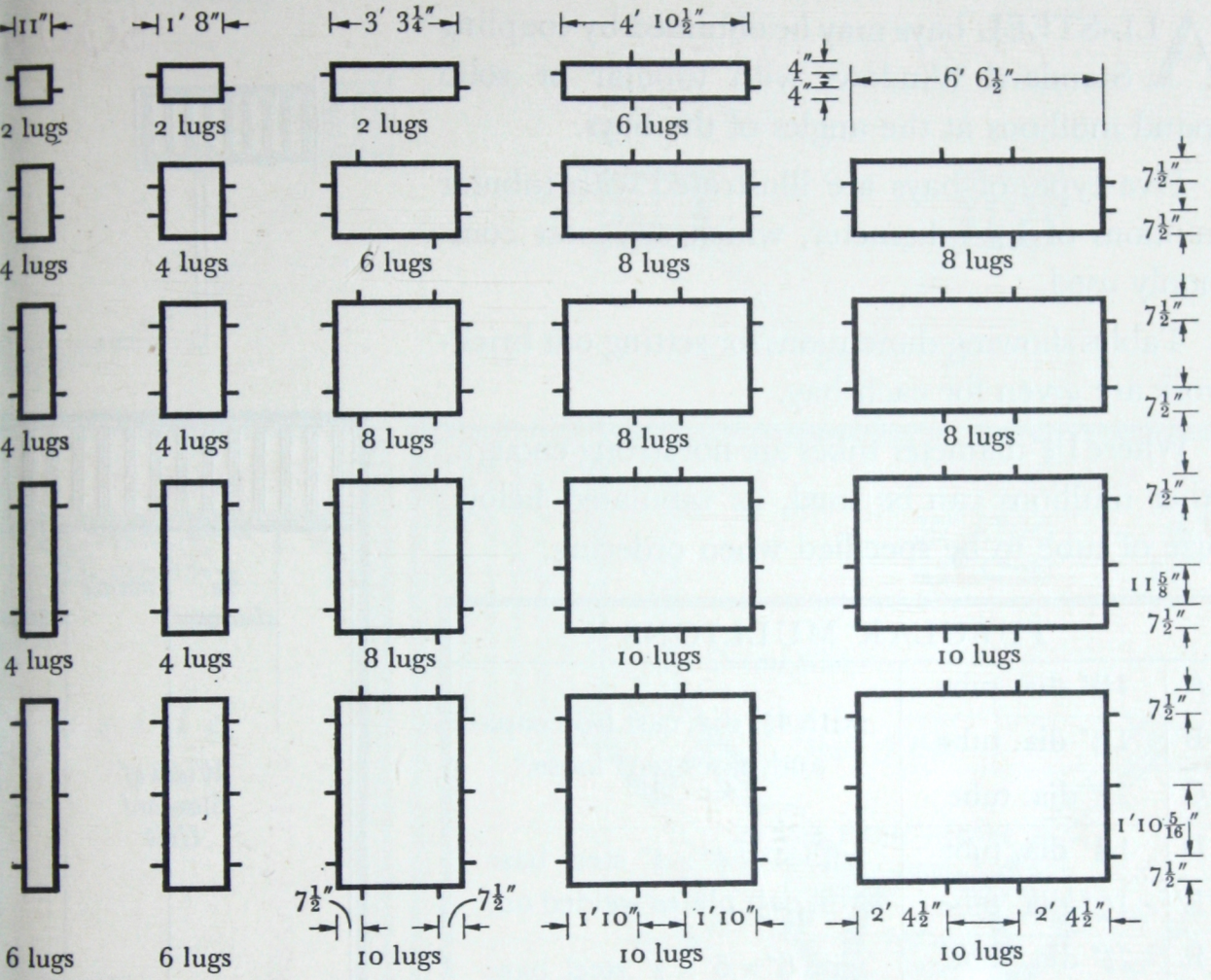
When fixing to wood frames, stonework, rebated brick or rebated concrete, the windows must be bedded in mastic at the rate of 1 lb. to 5 lineal feet; we manufacture our own special mastic and supply it where required at extra cost.

Outside rendering must be kept well clear of hinges and ventilators.

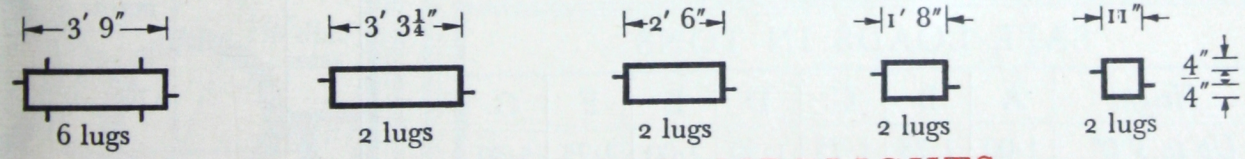
Full size details of Heads, Jambs and Cills are shown on page 6.

Ventilators All ventilators and doors are secured before despatch in the manner shown below, in order that they may arrive on the site in good

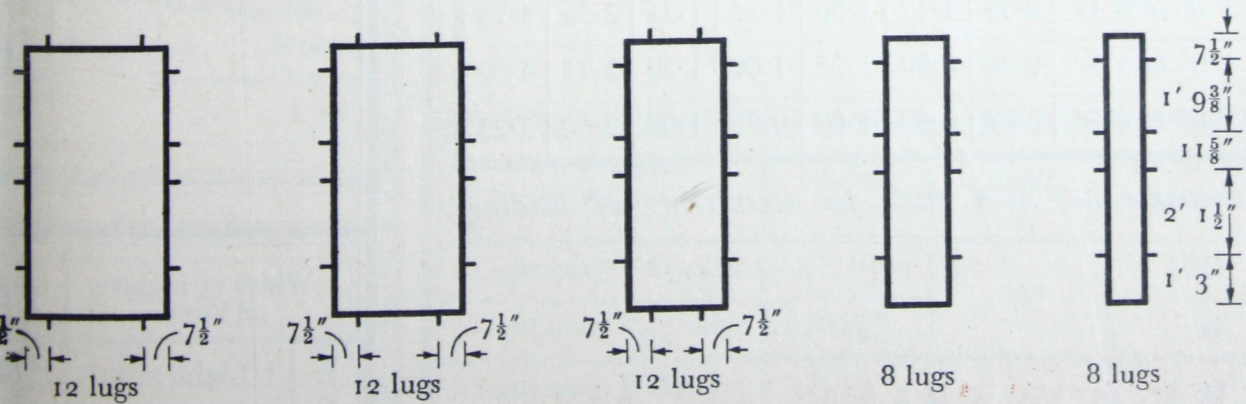
LUGS FOR WINDOWS



LUGS FOR FANLIGHTS



LUGS FOR DOORS AND SIDELIGHTS



above diagrams show fixing hole centres; see detail opposite for actual lug positions. litional holes to those shown above are drilled in window frames, and should be filled in n mastic when fixing.

ALL-STEEL bays may be obtained by coupling Standard Windows with tubular or solid round mullions at the angles of the bays.

Five types of bays are illustrated with tubular mullions of $1\frac{11}{16}$" diameter, which are most commonly used.

Tables showing dimensions for setting out brickwork are given for each bay.

Where $1\frac{11}{16}$" diameter tubes are not strong enough, other mullions can be used, as tabulated below. Size of tube to be specified when ordering.

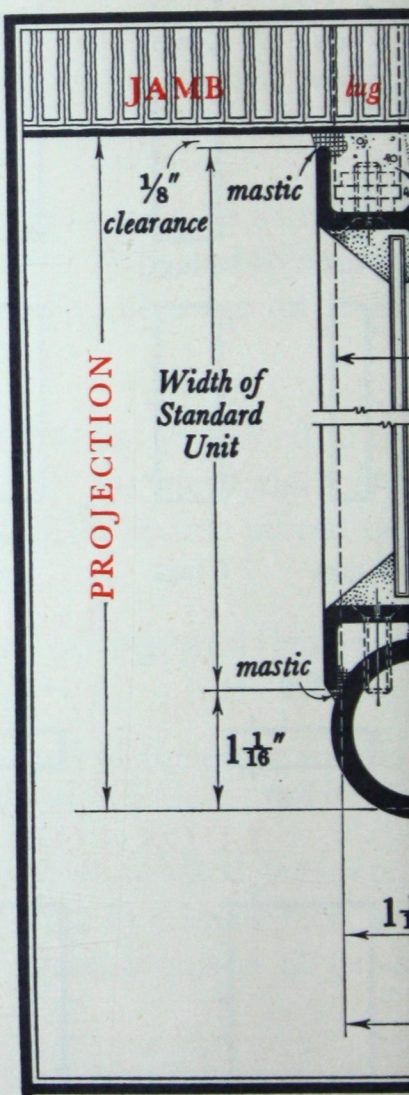
TUBULAR MULLIONS		
A	$1\frac{11}{16}$" dia. tube	with $4\frac{1}{2}$" dia. cast iron caps and bases sent loose.
B	$1\frac{29}{32}$" dia. tube	
C	$2\frac{3}{8}$" dia. tube	
D	$1\frac{11}{16}$" dia. tube	with 4" × 4" × $\frac{3}{8}$" steel base and cap plates welded on.
E	$1\frac{29}{32}$" dia. tube	
F	$2\frac{3}{8}$" dia. tube	with 6" × 6" × $\frac{3}{8}$" steel base and cap plates welded on.
G	2" dia. solid	

SAFE LOADS IN TONS							
Height	A	B	C	D	E	F	G
Up to 3′ 0″	1·00	1·25	1·75	1·50	2·00	2·75	5·50
3′ 0″ *to* 4′ 0″	0·75	1·17	1·50	1·25	1·75	2·50	4·75
4′ 0″ *to* 5′ 0″	0·50	0·90	1·25	1·00	1·50	2·25	4·00
5′ 0″ *to* 6′ 0″	0·20	0·60	1·00	0·75	1·00	2·00	3·25

Allowance has been made for eccentricity of loading.

WINDOW FRAMES ARE NOT DESIGNED TO CARRY WEIGHT

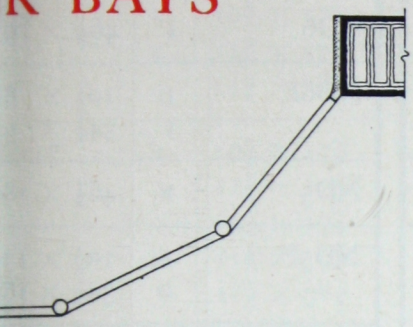
SQUAR



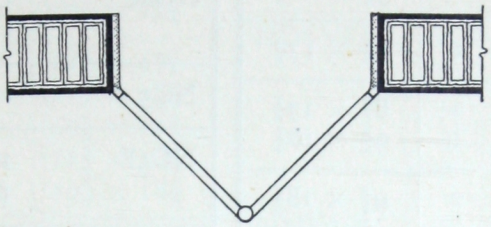
Width of Lights on Front		1′ 8
WIDTHS	1 Light return	1′ 10
	2 Light return	1′ 10

lf Full Size

R BAYS



ORIEL BAYS

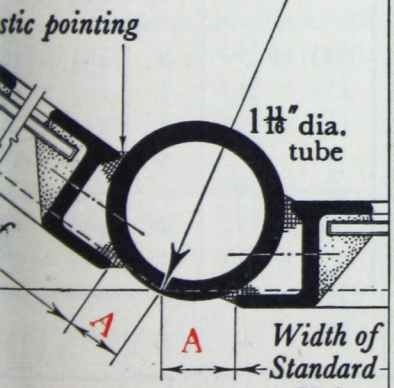


DIMENSIONS 'A'

3 Light Bays	$\frac{11}{16}$"
All others	$\frac{1}{2}$"

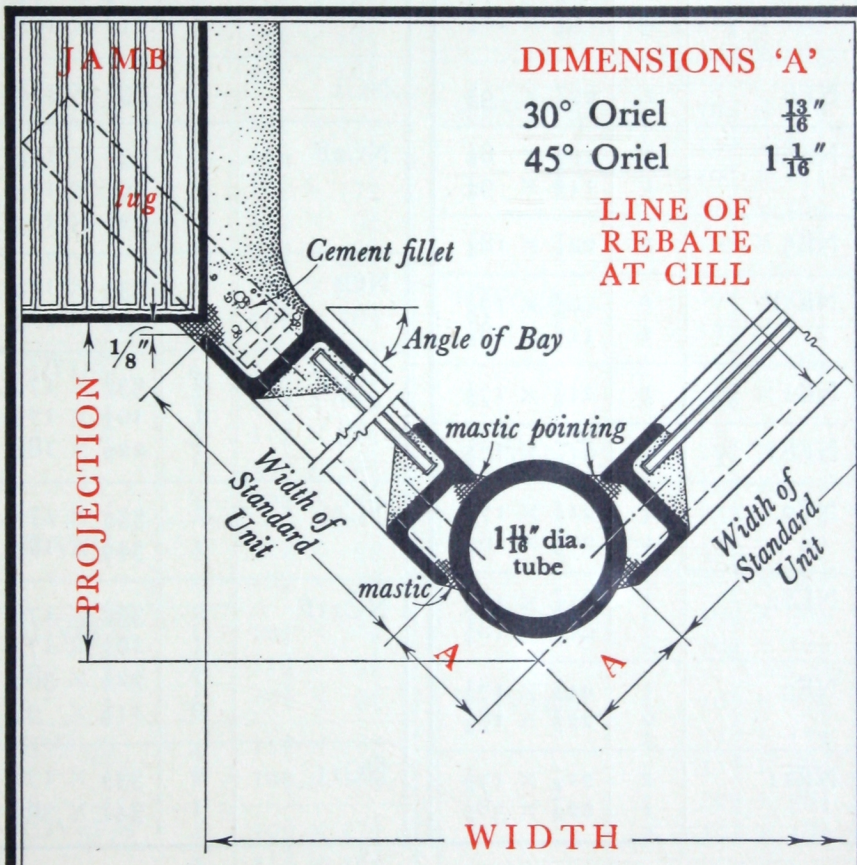
Inside

E OF
ATE
CILL



TH

5	6	7	8
' 6"	9' 0"	10' 6"	12' 0"
' 7 7/16"	5' 6 5/8"	6' 5 13/16"	7' 5"
' 10"	2' 3 9/16"	2' 7 7/16"	3' 0 3/4"



DIMENSIONS 'A'

30° Oriel	$\frac{13}{16}$"
45° Oriel	1 $\frac{1}{16}$"

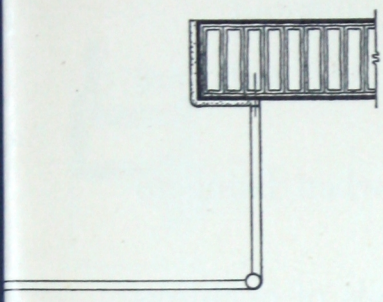
LINE OF REBATE AT CILL

No. of Lights on splays	Widths	Angle	Projection approx.
1 Light splay 1' 8" wide	2' 11 7/8"	30°	10 1/2"
2 Light splay 3' 3 1/4" wide	5' 9 1/8"		1' 8 1/4"
1 Light splay 1' 8" wide	2' 5 3/4"	45°	1' 2 7/8"
2 Light splay 3' 3 1/4" wide	4' 9"		2' 4 1/2"

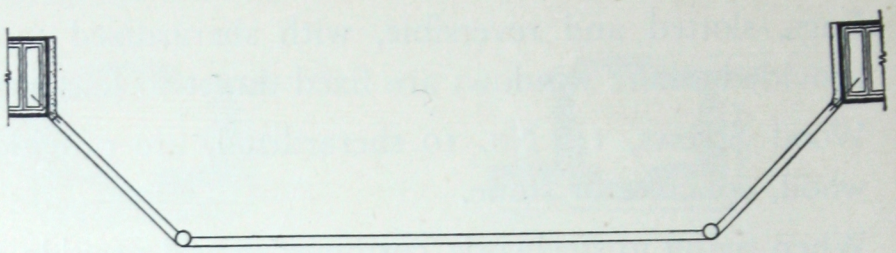
WINDOWS *in Bays*

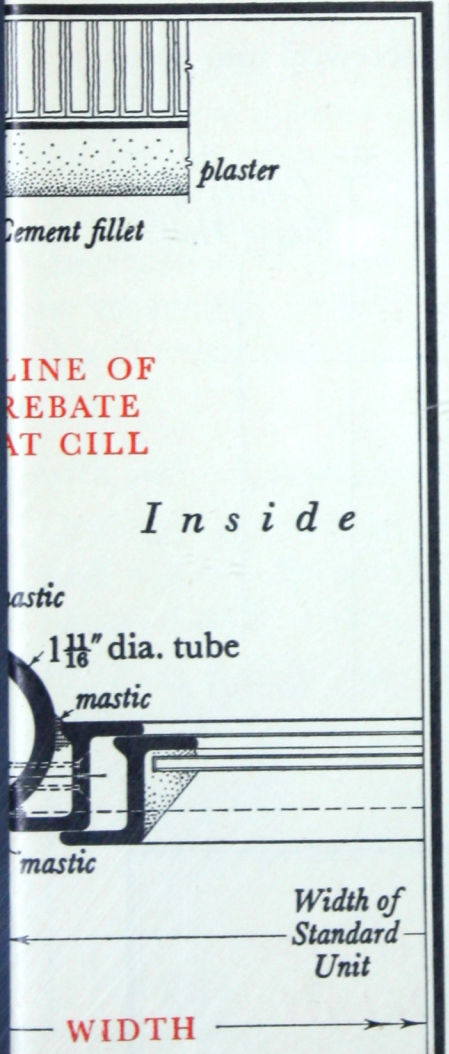
Details are Half Full Size

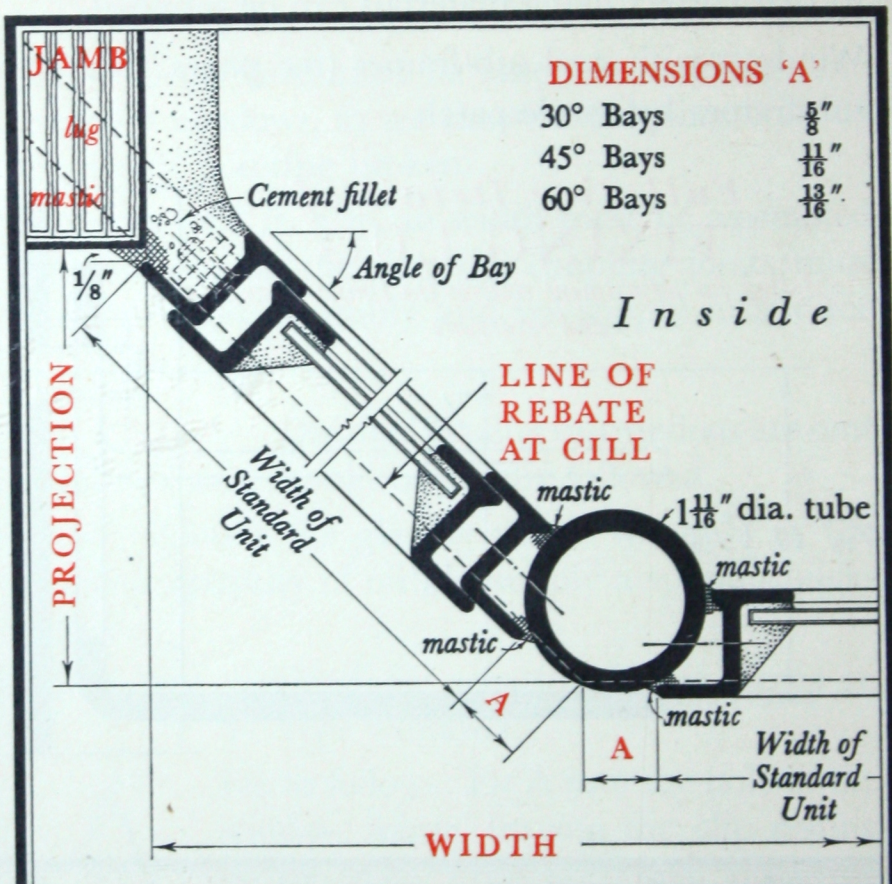
C BAYS



SPLAYED BAYS





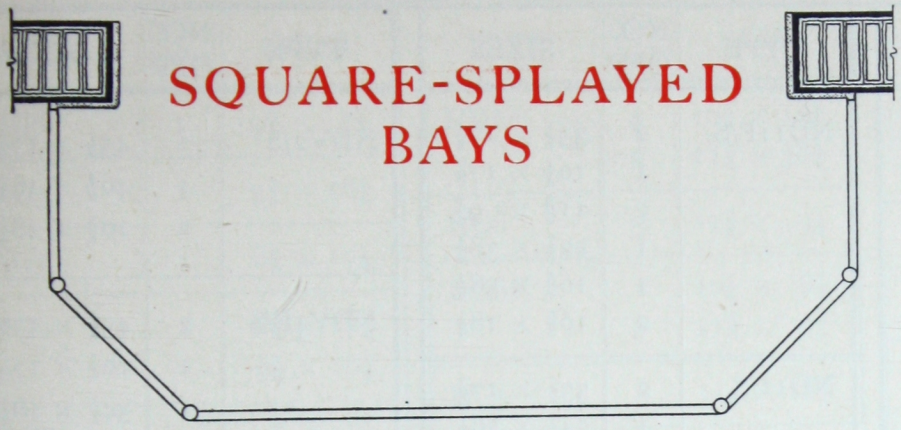


	Width of Lights on Front	1′ 8″	3′ 3¼″	4′ 10½″	6′ 6½″	Angle	Projection approx.
WIDTHS	1 Light return	4′ 8¾″	6′ 4″	7′ 11¼″	9′ 7 7/16″	30°	10⅜″
	2 Light return	7′ 6⅜″	9′ 1⅝″	10′ 8⅞″	12′ 5 1/16″		1′ 8″
	1 Light return	4′ 2½″	5′ 9¾″	7′ 5″	9′ 1 3/16″	45°	1′ 2⅝″
	2 Light return	6′ 5⅞″	8′ 1⅛″	9′ 8⅜″	11′ 4 9/16″		2′ 4⅜″
	1 Light return	3′ 6⅜″	5′ 1⅝″	6′ 8⅞″	8′ 5 1/16″	60°	1′ 6″
	2 Light return	5′ 1¾″	6′ 9″	8′ 4¼″	10′ 0 7/16″		2′ 10¾″

′ 3¼″	4′ 10½″	6′ 6½″	Projection approx.	
′ 5⅜″	5′ 0⅝″	6′ 8 13/16″	1′ 9¼″	
′ 5⅜″	5′ 0⅝″	6′ 8 13/16″	3′ 4½″	

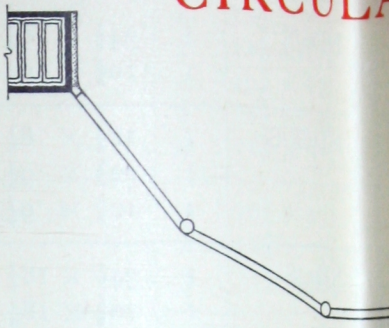
Details of HOPE'S V

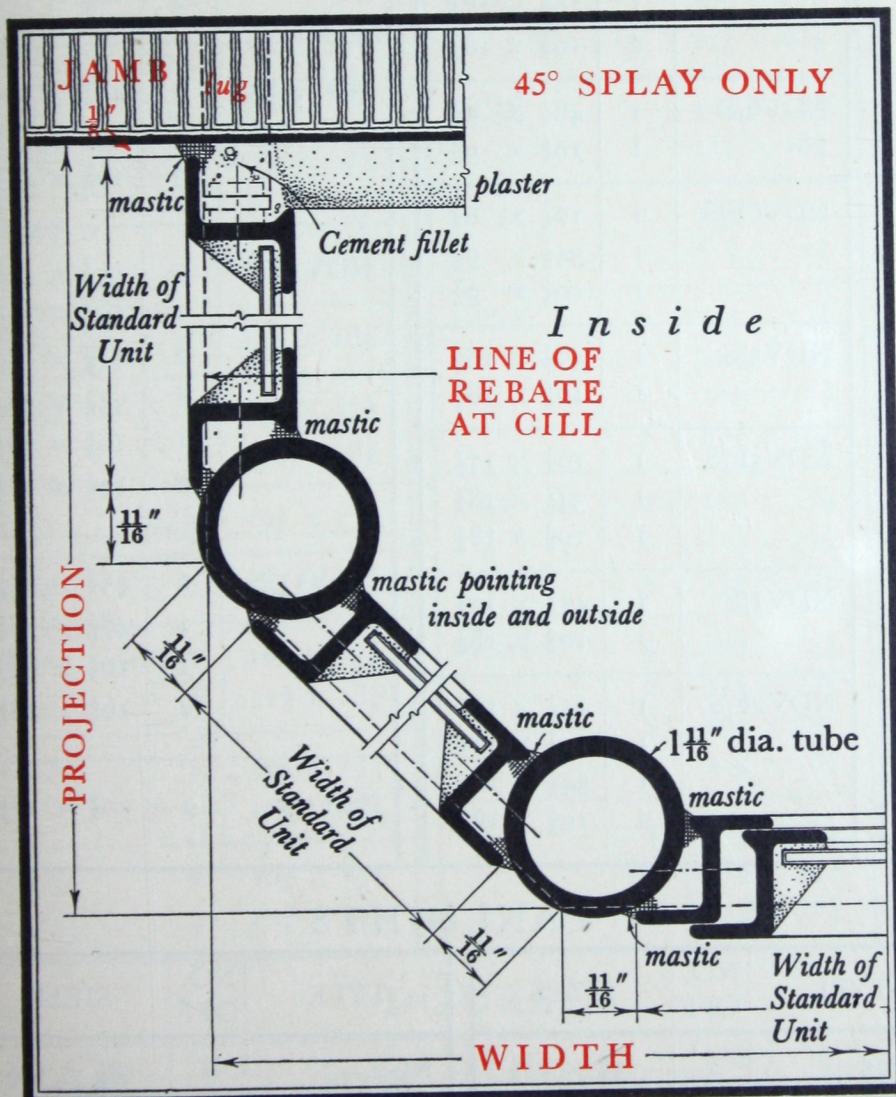
SQUARE-SPLAYED BAYS



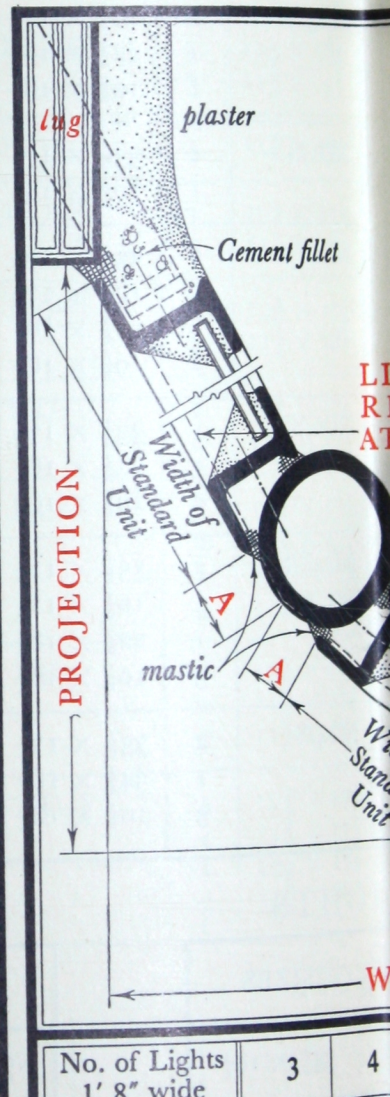
Details are H

CIRCULA





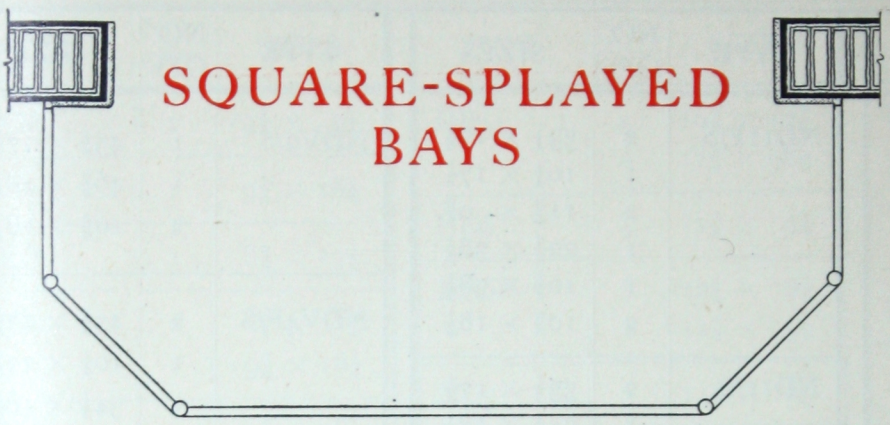
Width of Lights on Front		1′ 8″	3′ 3¼″	4′ 10½″	6′ 6½″	Angle	Projection approx.
WIDTHS	1 Light splay and return	4′ 3⅝″	5′ 10⅞″	7′ 6⅛″	9′ 2⅝″	45°	2′ 11⅞″
	2 Light splay and return	6′ 6⅞″	8′ 2⅛″	9′ 9⅜″	11′ 5⅝″		5′ 8¾″



No. of Lights 1′ 8″ wide	3	4
Widths	4′ 6″	6′ 4
Radius	2′ 8″	4′ 7¼
Projection approx.	1′ 1″	1′ 3

Details of HOPE'S

SQUARE-SPLAYED BAYS



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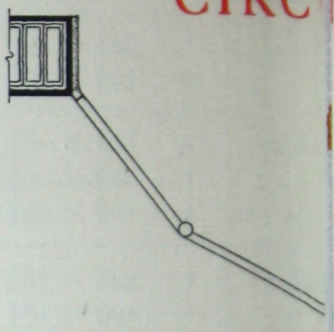
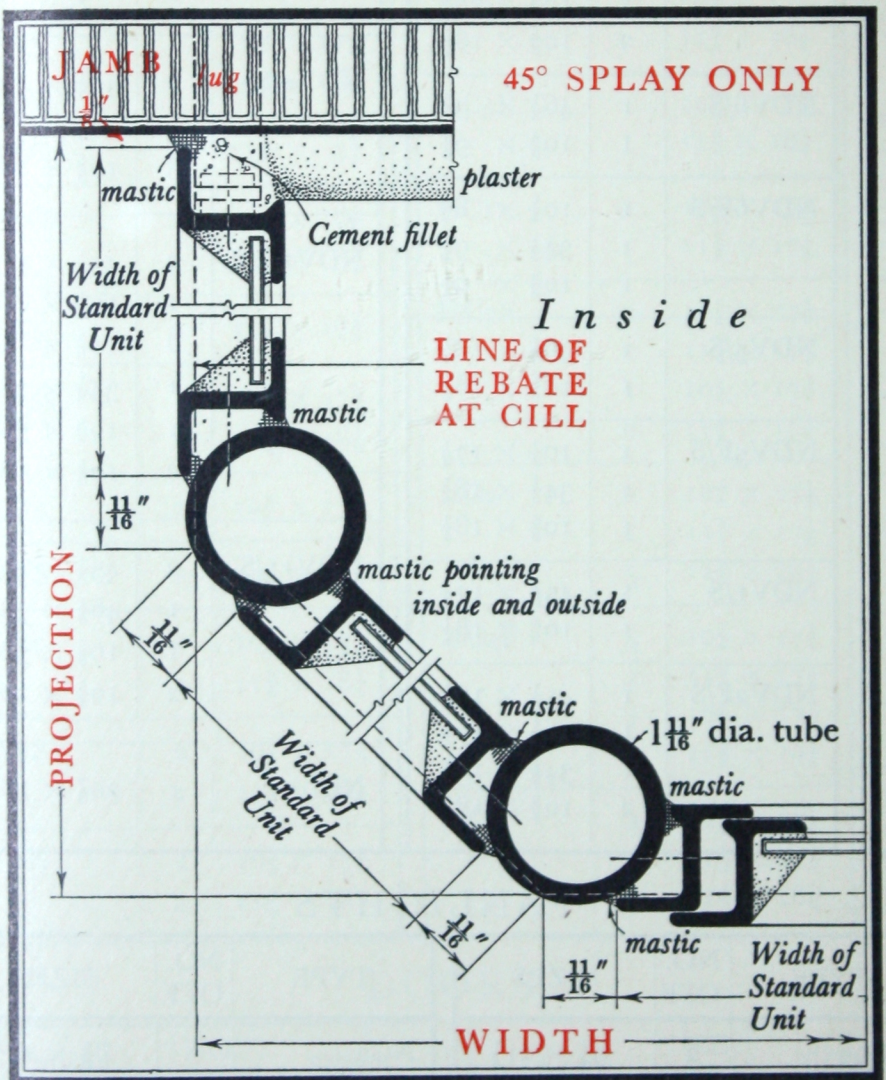
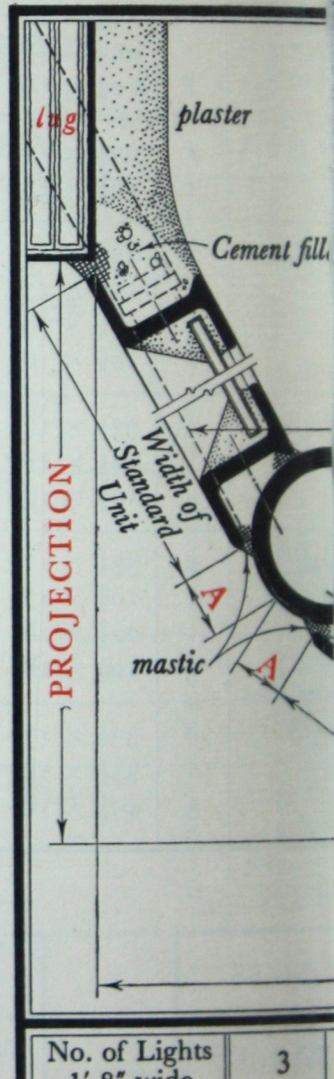




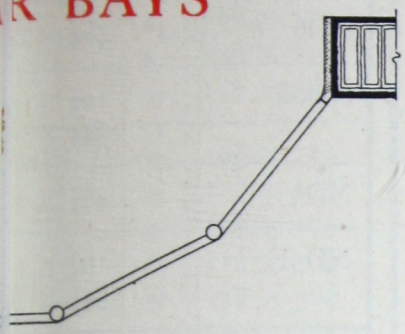


Width of Lights on Front		1′ 8″	3′ 3¼″	4′ 10½″	6′ 6½″	Angle	Projection approx.
WIDTHS	1 Light splay and return	4′ 3⅝″	5′ 10⅞″	7′ 6⅛″	9′ 2 5/16″	45°	2′ 11⅞″
	2 Light splay and return	6′ 6⅞″	8′ 2⅛″	9′ 9⅜″	11′ 5 9/16″		5′ 8¾″

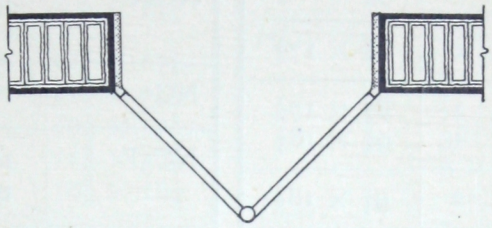
No. of Lights 1′ 8″ wide	3
Widths	4′ 6″
Radius	2′ 8″
Projection approx.	1′ 1″

lf Full Size

R BAYS



ORIEL BAYS



DIMENSIONS 'A'

3 Light Bays	$\frac{11}{16}$"
All others	$\frac{1}{2}$"

Inside

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stic pointing

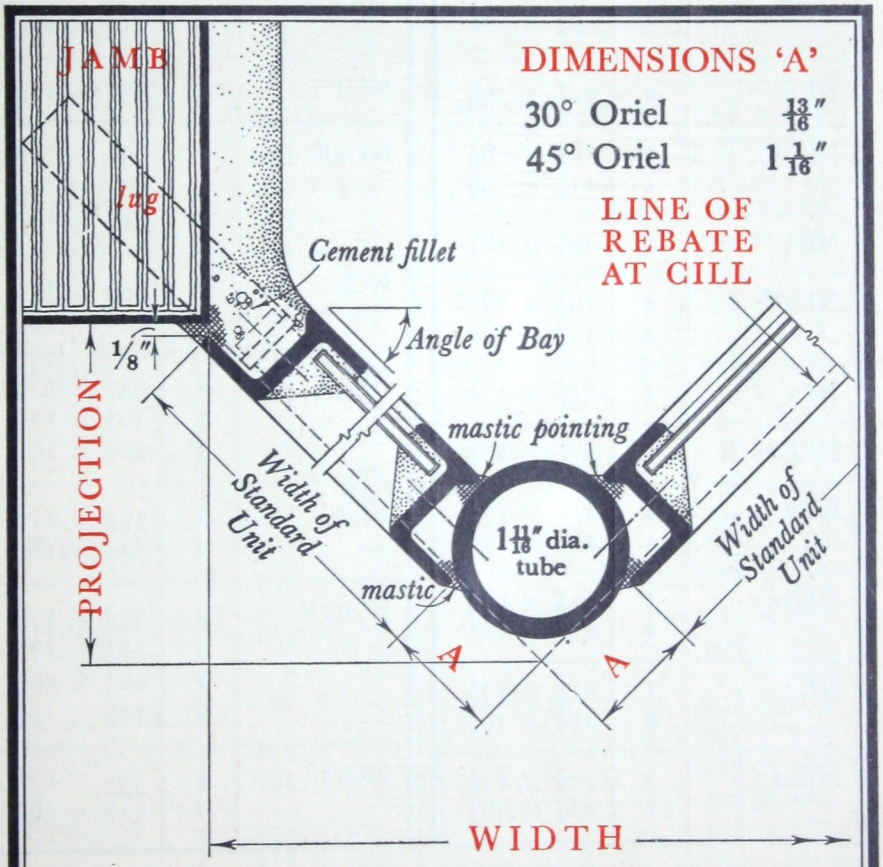
$1\frac{11}{16}$" dia. tube

A

A

Width of Standard Unit

TH



DIMENSIONS 'A'

30° Oriel	$\frac{13}{16}$"
45° Oriel	$1\frac{1}{16}$"

5	6	7	8
7' 6"	9' 0"	10' 6"	12' 0"
' $7\frac{7}{16}$"	5' $6\frac{5}{8}$"	6' $5\frac{13}{16}$"	7' 5"
' 10"	2' $3\frac{9}{16}$"	2' $7\frac{7}{16}$"	3' $0\frac{3}{4}$"

No. of Lights on splays	Widths	Angle	Projection approx.
1 Light splay 1' 8" wide	2' $11\frac{7}{8}$"	30°	$10\frac{1}{2}$"
2 Light splay 3' $3\frac{1}{4}$" wide	5' $9\frac{1}{8}$"		1' $8\frac{1}{4}$"
1 Light splay 1' 8" wide	2' $5\frac{3}{4}$"	45°	1' $2\frac{7}{8}$"
2 Light splay 3' $3\frac{1}{4}$" wide	4' 9"		2' $4\frac{1}{2}$"

ALL-STEEL bays may be obtained by coupling Standard Windows with tubular or solid round mullions at the angles of the bays.

Five types of bays are illustrated with tubular mullions of $1\frac{11}{16}$" diameter, which are most commonly used.

Tables showing dimensions for setting out brickwork are given for each bay.

Where $1\frac{11}{16}$" diameter tubes are not strong enough, other mullions can be used, as tabulated below. Size of tube to be specified when ordering.

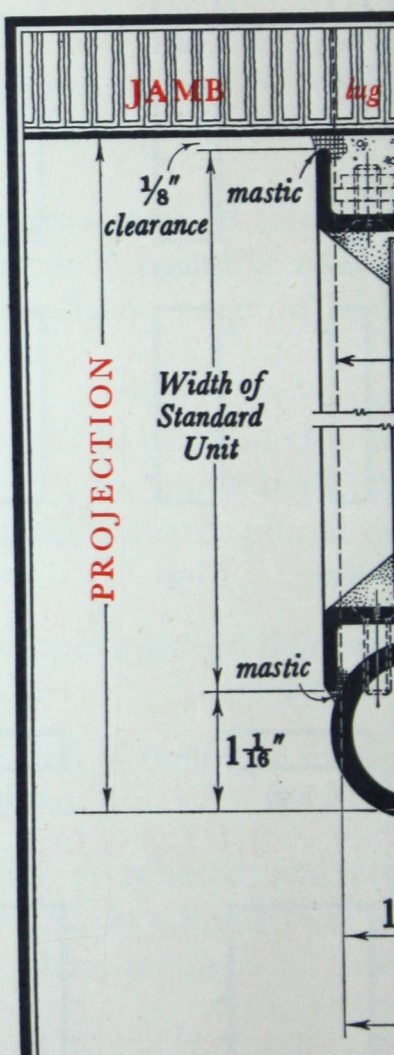
TUBULAR MULLIONS		
A	$1\frac{11}{16}$" dia. tube	with $4\frac{1}{2}$" dia. cast iron caps and bases sent loose.
B	$1\frac{29}{32}$" dia. tube	
C	$2\frac{3}{8}$" dia. tube	
D	$1\frac{11}{16}$" dia. tube	with 4" × 4" × $\frac{3}{8}$" steel base and cap plates welded on.
E	$1\frac{29}{32}$" dia. tube	
F	$2\frac{3}{8}$" dia. tube	with 6" × 6" × $\frac{3}{8}$" steel base and cap plates welded on.
G	2" dia. solid	

SAFE LOADS IN TONS							
Height	A	B	C	D	E	F	G
Up to 3′ 0″	1·00	1·25	1·75	1·50	2·00	2·75	5·50
3′ 0″ *to* 4′ 0″	0·75	1·17	1·50	1·25	1·75	2·50	4·75
4′ 0″ *to* 5′ 0″	0·50	0·90	1·25	1·00	1·50	2·25	4·00
5′ 0″ *to* 6′ 0″	0·20	0·60	1·00	0·75	1·00	2·00	3·25

Allowance has been made for eccentricity of loading.

WINDOW FRAMES ARE NOT DESIGNED TO CARRY WEIGHT

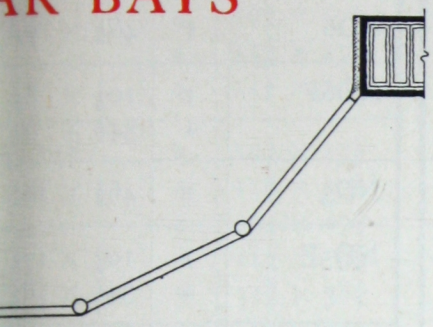
SQUA



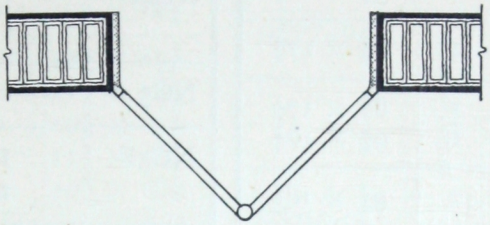
Width of Lights on Front		1′
WIDTHS	1 Light return	1′ 1
	2 Light return	1′ 1

alf Full Size

AR BAYS



ORIEL BAYS



DIMENSIONS 'A'

3 Light Bays	$\frac{11}{16}$"
All others	$\frac{1}{2}$"

Inside

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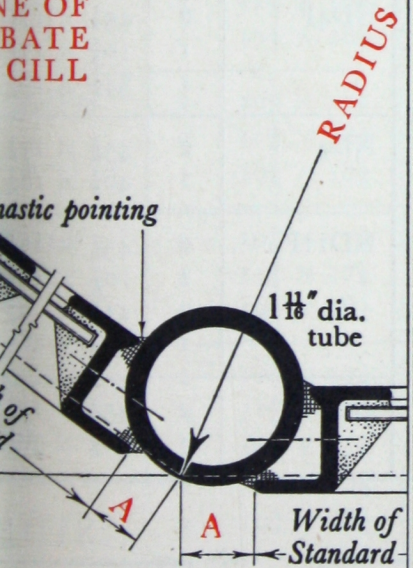
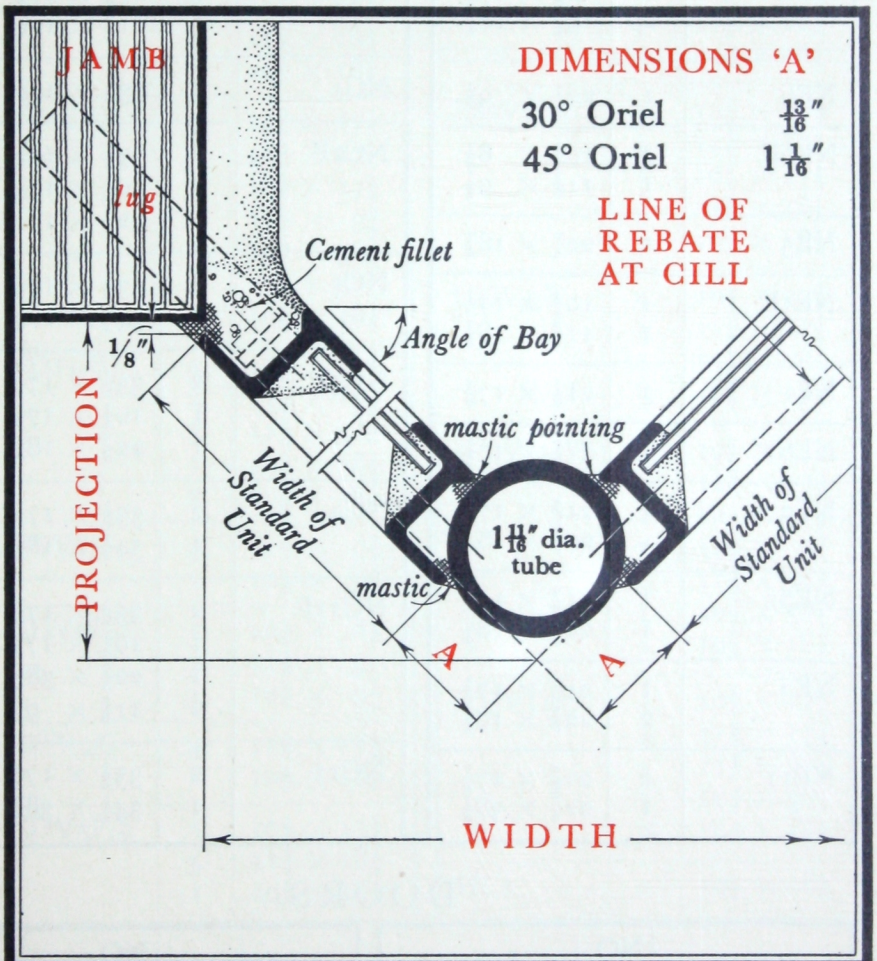
BATE
CILL



DTH

5	6	7	8
7′ 6″	9′ 0″	10′ 6″	12′ 0″
4′ 7 7/16″	5′ 6 5/8″	6′ 5 13/16″	7′ 5″
1′ 10″	2′ 3 9/16″	2′ 7 7/16″	3′ 0 3/4″



DIMENSIONS 'A'

30° Oriel	$\frac{13}{16}$"
45° Oriel	1 $\frac{1}{16}$"

LINE OF REBATE AT CILL

No. of Lights on splays	Widths	Angle	Projection approx.
1 Light splay 1′ 8″ wide	2′ 11 7/8″	30°	10 1/2″
2 Light splay 3′ 3 1/4″ wide	5′ 9 1/8″		1′ 8 1/4″
1 Light splay 1′ 8″ wide	2′ 5 3/4″	45°	1′ 2 7/8″
2 Light splay 3′ 3 1/4″ wide	4′ 9″		2′ 4 1/2″

'NO-PANE' TYPES

TYPE	NO. OFF	SIZES
NG6	1	9¾ × 9¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG2	1 1	8⅝ × 17⅛ 9¾ × 18¼
NG8	2	9¾ × 18¼
NG3	1 2	8⅝ × 17⅛ 9¾ × 18¼
NE6	1	22⅞ × 9¼
NE6F	1 1	10¼ × 8⅛ 11⅜ × 9¼
NE5	1	22⅞ × 18¼
NE5F	1 1	10¼ × 17⅛ 11⅜ × 18¼
NE1	1	21⅞ × 17⅛
NES1	1	21⅞ × 17⅛
NE2	1 1	21⅞ × 17⅛ 22⅞ × 18¼
NES2	1 1	21⅞ × 17⅛ 22⅞ × 18¼
NE3	1 2	21⅞ × 17⅛ 22⅞ × 18¼
NE11	2 1	21⅞ × 17⅛ 22⅞ × 38¼

TYPE	NO. OFF	SIZES
NC6	1	34½ × 9¼
NC6F	1 1	10¼ × 8⅛ 22⅞ × 9¼
NC5	1	34½ × 18¼
NC5F	1 1	10¼ × 17⅛ 22⅞ × 18¼
NC5E	1 1	21⅞ × 17⅛ 11⅜ × 18¼
NC1	1	33½ × 17⅛
NC2F	1 1 1	33½ × 17⅛ 10¼ × 17⅛ 22⅞ × 18¼
NC2	1 1	33½ × 17⅛ 34½ × 18¼
NC4F	2 1 1	33½ × 17⅛ 10¼ × 17⅛ 22⅞ × 18¼
NC4	2 1	33½ × 17⅛ 34½ × 18¼
NC11F	2 1 1 2	33½ × 17⅛ 10¼ × 17⅛ 22⅞ × 38¼ 11⅜ × 9¾
NC11	2 1	33½ × 17⅛ 34½ × 38¼

TYPE	NO. OFF	SIZES
ND6	1	46⅛ × 9
ND6F	1 1	10¼ × 8 34½ × 9
ND5	1	46⅛ × 18
ND5F	1 1	10¼ × 17 34½ × 18
ND5E	1 1	21⅞ × 17 22⅞ × 18
ND1	1	45⅛ × 17
ND2F	1 1 1	45⅛ × 17 10¼ × 17 34½ × 18
ND2	1 1	45⅛ × 17 46⅛ × 18
ND4F	2 1 1	45⅛ × 17 10¼ × 17 34½ × 18
ND4	2 1	45⅛ × 17 46⅛ × 18
ND11F	2 1 2 1	45⅛ × 1 10¼ × 1 11⅜ × 34½ × 3
ND11	2 1	45⅛ × 1 46⅛ × 3

DOORS

TYPE	NO. OFF	SIZES
NA25	2	33⅛ × 19⅛
	2	22⅞ × 19⅛
	1	11⅜ × 19⅛
	1	11⅜ × 15⅛

TYPE	NO. OFF	SIZES
NA2	2	33⅛ × 16¼
	2	22⅞ × 16¼
	1	11⅜ × 16¼
	1	11⅜ × 12¼
NA15	1	33⅛ × 25⅜
	1	22⅞ × 25⅜
	1	11⅜ × 21⅜

SID

TYPE
NA5
NA6

GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES
HD4	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 18¼
HD11F	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	3	11⅜ × 38¼
HD11	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 38¼
HD6/S	3	11⅜ × 9¼
	1	10⅝ × 9¼
HD6F/S	1	10¼ × 8⅛
	2	11⅜ × 9¼
	1	10⅝ × 9¼
HD5/S	3	11⅜ × 18¼
	1	10⅝ × 18¼
HD5F/S	1	10¼ × 17⅛
	2	11⅜ × 18¼
	1	10⅝ × 18¼
HD1/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10⅝ × 18¼
HD2F/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
	2	10⅝ × 18¼

TYPE	NO. OFF	SIZES
HD2/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	3	11⅜ × 18¼
	2	10⅝ × 18¼
HD4F/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
	3	10⅝ × 18¼
HD4/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 18¼
	3	10⅝ × 18¼
HD11F/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	2	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HD11/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HDV6/S	4	11⅜ × 9¼
	1	10⅝ × 9¼
HDV6F/S	1	10¼ × 8⅛
	3	11⅜ × 9¼
	1	10⅝ × 9¼
HDV5/S	4	11⅜ × 18¼
	1	10⅝ × 18¼
HDV5F/S	1	10¼ × 17⅛
	3	11⅜ × 18¼
	1	10⅝ × 18¼

TYPE	NO. OFF	SIZES
HDV1/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10⅝ × 18¼
HDV2F/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
	2	10⅝ × 18¼
HDV2/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	4	11⅜ × 18¼
	2	10⅝ × 18¼
HDV4F/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
	3	10⅝ × 18¼
HDV4/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 18¼
	3	10⅝ × 18¼
HDV11F/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	3	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HDV11/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HL1	2	10¼ × 16⅛

GHTS

	SIZES
	11⅜ × 18¼
	11⅜ × 9¼

FANLIGHTS

TYPE	NO. OFF	SIZES
NG25	2	9¾ × 21⅛
NG25F	1	8⅝ × 20
	1	9¾ × 21⅛
NG15	1	9¾ × 28¼
NG15F	1	8⅝ × 27⅛
NG8	2	9¾ × 18¼

TYPE	NO. OFF	SIZES
NG2	1	8⅝ × 17⅛
	1	9¾ × 18¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG6	1	9¾ × 9¼

NDOWS

GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES
ND6/S	1	34½ × 9¼
	1	10⅝ × 9¼
ND6F/S	1	10¼ × 8⅛
	1	22⅞ × 9¼
	1	10⅝ × 9¼
ND5/S	1	34½ × 18¼
	1	10⅝ × 18¼
ND5F/S	1	10¼ × 17⅛
	1	22⅞ × 18¼
	1	10⅝ × 18¼
ND1/S	1	33½ × 17⅛
	1	10⅝ × 18¼
ND2F/S	1	33½ × 17⅛
	1	10¼ × 17⅛
	1	22⅞ × 18¼
	2	10⅝ × 18¼
ND2/S	1	33½ × 17⅛
	1	34½ × 18¼
	2	10⅝ × 18¼
ND4F/S	2	33½ × 17⅛
	1	10¼ × 17⅛
	1	22⅞ × 18¼
	3	10⅝ × 18¼
ND4/S	2	33½ × 17⅛
	1	34½ × 18¼
	3	10⅝ × 18¼

TYPE	NO. OFF	SIZES
ND11F/S	2	33½ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	1	22⅞ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
ND11/S	2	33½ × 17⅛
	1	34½ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
NDV6/S	1	46⅛ × 9¼
	1	10⅝ × 9¼
NDV6F/S	1	10¼ × 8⅛
	1	34½ × 9¼
	1	10⅝ × 9¼
NDV5/S	1	46⅛ × 18¼
	1	10⅝ × 18¼
NDV5F/S	1	10¼ × 17⅛
	1	34½ × 18¼
	1	10⅝ × 18¼
NDV1/S	1	45⅛ × 17⅛
	1	10⅝ × 18¼
NDV2F/S	1	45⅛ × 17⅛
	1	10¼ × 17⅛
	1	34½ × 18¼
	2	10⅝ × 18¼

TYPE	NO. OFF	SIZES
NDV2/S	1	45⅛ × 17⅛
	1	46⅛ × 18¼
	2	10⅝ × 18¼
NDV4F/S	2	45⅛ × 17⅛
	1	10¼ × 17⅛
	1	34½ × 18¼
	3	10⅝ × 18¼
NDV4/S	2	45⅛ × 17⅛
	1	46⅛ × 18¼
	3	10⅝ × 18¼
NDV11F/S	2	45⅛ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	1	34½ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
NDV11/S	2	45⅛ × 17⅛
	1	46⅛ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
NL1	1	20⅞ × 16⅛

IGHTS

O. FF	SIZES
1	34½ × 18¼
1	11⅜ × 18¼
1	22⅞ × 18¼
1	34½ × 9¼
1	11⅜ × 9¼
1	22⅞ × 9¼

FANLIGHTS

TYPE	NO. OFF	SIZES
NG25	2	9¾ × 21⅛
NG25F	1	8⅝ × 20
	1	9¾ × 21⅛
NG15	1	9¾ × 28¼
NG15F	1	8⅝ × 27⅛
NG8	2	9¾ × 18¼

TYPE	NO. OFF	SIZES
NG2	1	8⅝ × 17⅛
	1	9¾ × 18¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG6	1	9¾ × 9¼

HORIZONTAL PANE TYPES

HOPE'S W

TYPE	NO. OFF	SIZES
NG6	1	9¾ × 9¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG2	1	8⅝ × 17⅛
	1	9¾ × 18¼
NG8	2	9¾ × 18¼
NG3	1	8⅝ × 17⅛
	2	9¾ × 18¼
HE6	2	11⅜ × 9¼
NE6F	1	10¼ × 8⅛
	1	11⅜ × 9¼
HE5	2	11⅜ × 18¼
NE5F	1	10¼ × 17⅛
	1	11⅜ × 18¼
HE1	2	10¾ × 17⅛
HES1	2	10¾ × 17⅛
HE2	2	10¾ × 17⅛
	2	11⅜ × 18¼
HES2	2	10¾ × 17⅛
	2	11⅜ × 18¼
HE3	2	10¾ × 17⅛
	4	11⅜ × 18¼

TYPE	NO. OFF	SIZES
HE11	4	10¾ × 17⅛
	2	11⅜ × 38¼
HC6	3	11⅜ × 9¼
HC6F	1	10¼ × 8⅛
	2	11⅜ × 9¼
HC5	3	11⅜ × 18¼
HC5F	1	10¼ × 17⅛
	2	11⅜ × 18¼
HC5E	2	10¾ × 17⅛
	1	11⅜ × 18¼
HC1	2	10¾ × 17⅛
	1	11⅜ × 17⅛
HC2F	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
HC2	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	3	11⅜ × 18¼
HC4F	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
HC4	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 18¼

TYPE	NO. OFF	SIZES
HC11F	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¼
	2	11⅜ × 38¼
HC11	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 38¼
HD6	4	11⅜ × 9¼
HD6F	1	10¼ × 8⅛
	3	11⅜ × 9¼
HD5	4	11⅜ × 18¼
HD5F	1	10¼ × 17⅛
	3	11⅜ × 18¼
HD5E	2	10¾ × 17⅛
	2	11⅜ × 18¼
HD1	2	10¾ × 17⅛
	2	11⅜ × 17⅛
HD2F	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
HD2	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	4	11⅜ × 18¼
HD4F	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼

DOORS

TYPE	NO. OFF	SIZES
HA25	2	9⅞ × 19⅛
	9	11⅜ × 19⅛
	1	11⅜ × 15⅛
HA2	2	9⅞ × 16¼
	9	11⅜ × 16¼
	1	11⅜ × 12¼

TYPE	NO. OFF	SIZES
HA15	1	9⅞ × 25⅜
	4	11⅜ × 25⅜
	1	11⅜ × 21⅜

SIDE

TYPE	N O
HA5	
HA6	

HORIZONTAL PANE TYPES

HOPE'S

TYPE	NO. OFF	SIZES
NG6	1	9¾ × 9¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG2	1	8⅝ × 17⅛
	1	9¾ × 18¼
NG8	2	9¾ × 18¼
NG3	1	8⅝ × 17⅛
	2	9¾ × 18¼
HE6	2	11⅜ × 9¼
NE6F	1	10¼ × 8⅛
	1	11⅜ × 9¼
HE5	2	11⅜ × 18¼
NE5F	1	10¼ × 17⅛
	1	11⅜ × 18¼
HE1	2	10¾ × 17⅛
HES1	2	10¾ × 17⅛
HE2	2	10¾ × 17⅛
	2	11⅜ × 18¼
HES2	2	10¾ × 17⅛
	2	11⅜ × 18¼
HE3	2	10¾ × 17⅛
	4	11⅜ × 18¼

TYPE	NO. OFF	SIZES
HE11	4	10¾ × 17⅛
	2	11⅜ × 38¼
HC6	3	11⅜ × 9¼
HC6F	1	10¼ × 8⅛
	2	11⅜ × 9¼
HC5	3	11⅜ × 18¼
HC5F	1	10¼ × 17⅛
	2	11⅜ × 18¼
HC5E	2	10¾ × 17⅛
	1	11⅜ × 18¼
HC1	2	10¾ × 17⅛
	1	11⅜ × 17⅛
HC2F	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
HC2	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	3	11⅜ × 18¼
HC4F	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
HC4	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 18¼

TYPE	NO. OFF	SIZ
HC11F	4	10¾ ×
	2	11⅜ ×
	1	10¼ ×
	2	11⅜ ×
	2	11⅜ ×
HC11	4	10¾ ×
	2	11⅜ ×
	3	11⅜ ×
HD6	4	11⅜ ×
HD6F	1	10¼ ×
	3	11⅜ ×
HD5	4	11⅜ ×
HD5F	1	10¼ ×
	3	11⅜ ×
HD5E	2	10¾ ×
	2	11⅜ ×
HD1	2	10¾ ×
	2	11⅜ ×
HD2F	2	10¾ ×
	2	11⅜ ×
	1	10¼ ×
	3	11⅜ ×
HD2	2	10¾ ×
	2	11⅜ ×
	4	11⅜ ×
HD4F	4	10¾ ×
	4	11⅜ ×
	1	10¼ ×
	3	11⅜ ×

DOORS

TYPE	NO. OFF	SIZES
HA25	2	9⅞ × 19⅛
	9	11⅜ × 19⅛
	1	11⅜ × 15⅛
HA2	2	9⅞ × 16¼
	9	11⅜ × 16¼
	1	11⅜ × 12¼

TYPE	NO. OFF	SIZES
HA15	1	9⅞ × 25⅜
	4	11⅜ × 25⅜
	1	11⅜ × 21⅜

SID

TYPE
HA5
HA6

GLASS SIZES (CLEARANCE ALLOWED)

YPE	NO. OFF	SIZES
4	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 18¼
11F	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	3	11⅜ × 38¼
11	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 38¼
6/S	3	11⅜ × 9¼
	1	10⅝ × 9¼
6F/S	1	10¼ × 8⅛
	2	11⅜ × 9¼
	1	10⅝ × 9¼
5/S	3	11⅜ × 18¼
	1	10⅝ × 18¼
5F/S	1	10¼ × 17⅛
	2	11⅜ × 18¼
	1	10⅝ × 18¼
1/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10⅝ × 18¼
2F/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
	2	10⅝ × 18¼

TYPE	NO. OFF	SIZES
HD2/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	3	11⅜ × 18¼
	2	10⅝ × 18¼
HD4F/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
	3	10⅝ × 18¼
HD4/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 18¼
	3	10⅝ × 18¼
HD11F/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	2	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HD11/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HDV6/S	4	11⅜ × 9¼
	1	10⅝ × 9¼
HDV6F/S	1	10¼ × 8⅛
	3	11⅜ × 9¼
	1	10⅝ × 9¼
HDV5/S	4	11⅜ × 18¼
	1	10⅝ × 18¼
HDV5F/S	1	10¼ × 17⅛
	3	11⅜ × 18¼
	1	10⅝ × 18¼

TYPE	NO. OFF	SIZES
HDV1/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10⅝ × 18¼
HDV2F/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
	2	10⅝ × 18¼
HDV2/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	4	11⅜ × 18¼
	2	10⅝ × 18¼
HDV4F/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
	3	10⅝ × 18¼
HDV4/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 18¼
	3	10⅝ × 18¼
HDV11F/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	3	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HDV11/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HL1	2	10¼ × 16⅛

HTS

SIZES
11⅜ × 18¼
11⅜ × 9¼

FANLIGHTS

TYPE	NO. OFF	SIZES
NG25	2	9¾ × 21⅛
NG25F	1	8⅝ × 20
	1	9¾ × 21⅛
NG15	1	9¾ × 28¼
NG15F	1	8⅝ × 27⅛
NG8	2	9¾ × 18¼

TYPE	NO. OFF	SIZES
NG2	1	8⅝ × 17⅛
	1	9¾ × 18¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG6	1	9¾ × 9¼

TYPE	NO. OFF	SIZES
NG6	1	$9\frac{3}{4} \times 9\frac{1}{4}$
NG5	1	$9\frac{3}{4} \times 18\frac{1}{4}$
NG1	1	$8\frac{5}{8} \times 17\frac{1}{8}$
NG2	1 1	$8\frac{5}{8} \times 17\frac{1}{8}$ $9\frac{3}{4} \times 18\frac{1}{4}$
NG8	2	$9\frac{3}{4} \times 18\frac{1}{4}$
NG3	1 2	$8\frac{5}{8} \times 17\frac{1}{8}$ $9\frac{3}{4} \times 18\frac{1}{4}$
NE6	1	$22\frac{7}{8} \times 9\frac{1}{4}$
NE6F	1 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{1}{4}$
NE5	1	$22\frac{7}{8} \times 18\frac{1}{4}$
NE5F	1 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$
NE1	1	$21\frac{7}{8} \times 17\frac{1}{8}$
NES1	1	$21\frac{7}{8} \times 17\frac{1}{8}$
NE2	1 1	$21\frac{7}{8} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
NES2	1 1	$21\frac{7}{8} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
NE3	1 2	$21\frac{7}{8} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
NE11	2 1	$21\frac{7}{8} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 38\frac{1}{4}$

TYPE	NO. OFF	SIZES
NC6	1	$34\frac{1}{2} \times 9\frac{1}{4}$
NC6F	1 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $22\frac{7}{8} \times 9\frac{1}{4}$
NC5	1	$34\frac{1}{2} \times 18\frac{1}{4}$
NC5F	1 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
NC5E	1 1	$21\frac{7}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$
NC1	1	$33\frac{1}{2} \times 17\frac{1}{8}$
NC2F	1 1 1	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
NC2	1 1	$33\frac{1}{2} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$
NC4F	2 1 1	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
NC4	2 1	$33\frac{1}{2} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$
NC11F	2 1 1 2	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 38\frac{1}{4}$ $11\frac{3}{8} \times 9\frac{3}{4}$
NC11	2 1	$33\frac{1}{2} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 38\frac{1}{4}$

TYPE	NO. OFF	SIZES
ND6	1	$46\frac{1}{8} \times 9\frac{1}{4}$
ND6F	1 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $34\frac{1}{2} \times 9\frac{1}{4}$
ND5	1	$46\frac{1}{8} \times 18\frac{1}{4}$
ND5F	1 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$
ND5E	1 1	$21\frac{7}{8} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$
ND1	1	$45\frac{1}{8} \times 17\frac{1}{8}$
ND2F	1 1 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$
ND2	1 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $46\frac{1}{8} \times 18\frac{1}{4}$
ND4F	2 1 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$
ND4	2 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $46\frac{1}{8} \times 18\frac{1}{4}$
ND11F	2 1 2 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times$ $34\frac{1}{2} \times 38\frac{1}{4}$
ND11	2 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $46\frac{1}{8} \times 38\frac{1}{4}$

DOORS

TYPE	NO. OFF	SIZES
NA25	2	$33\frac{1}{8} \times 19\frac{1}{8}$
	2	$22\frac{7}{8} \times 19\frac{1}{8}$
	1	$11\frac{3}{8} \times 19\frac{1}{8}$
	1	$11\frac{3}{8} \times 15\frac{1}{8}$

TYPE	NO. OFF	SIZES
NA2	2	$33\frac{1}{8} \times 16\frac{1}{4}$
	2	$22\frac{7}{8} \times 16\frac{1}{4}$
	1	$11\frac{3}{8} \times 16\frac{1}{4}$
	1	$11\frac{3}{8} \times 12\frac{1}{4}$
NA15	1	$33\frac{1}{8} \times 25\frac{3}{8}$
	1	$22\frac{7}{8} \times 25\frac{3}{8}$
	1	$11\frac{3}{8} \times 21\frac{3}{8}$

SID

TYPE
NA5
NA6

GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES
HD4	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 18¼
HD11F	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	3	11⅜ × 38¼
HD11	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 38¼
HD6/S	3	11⅜ × 9¼
	1	10⅝ × 9¼
HD6F/S	1	10¼ × 8⅛
	2	11⅜ × 9¼
	1	10⅝ × 9¼
HD5/S	3	11⅜ × 18¼
	1	10⅝ × 18¼
HD5F/S	1	10¼ × 17⅛
	2	11⅜ × 18¼
	1	10⅝ × 18¼
HD1/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10⅝ × 18¼
HD2F/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
	2	10⅝ × 18¼

TYPE	NO. OFF	SIZES
HD2/S	2	10¾ × 17⅛
	1	11⅜ × 17⅛
	3	11⅜ × 18¼
	2	10⅝ × 18¼
HD4F/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 18¼
	3	10⅝ × 18¼
HD4/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 18¼
	3	10⅝ × 18¼
HD11F/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	2	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HD11/S	4	10¾ × 17⅛
	2	11⅜ × 17⅛
	3	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HDV6/S	4	11⅜ × 9¼
	1	10⅝ × 9¼
HDV6F/S	1	10¼ × 8⅛
	3	11⅜ × 9¼
	1	10⅝ × 9¼
HDV5/S	4	11⅜ × 18¼
	1	10⅝ × 18¼
HDV5F/S	1	10¼ × 17⅛
	3	11⅜ × 18¼
	1	10⅝ × 18¼

TYPE	NO. OFF	SIZES
HDV1/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10⅝ × 18¼
HDV2F/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
	2	10⅝ × 18¼
HDV2/S	2	10¾ × 17⅛
	2	11⅜ × 17⅛
	4	11⅜ × 18¼
	2	10⅝ × 18¼
HDV4F/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	3	11⅜ × 18¼
	3	10⅝ × 18¼
HDV4/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 18¼
	3	10⅝ × 18¼
HDV11F/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	1	10¼ × 17⅛
	2	11⅜ × 9¾
	3	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HDV11/S	4	10¾ × 17⅛
	4	11⅜ × 17⅛
	4	11⅜ × 38¼
	1	10⅝ × 38¼
	2	10⅝ × 18¼
HL1	2	10¼ × 16⅛

GHTS

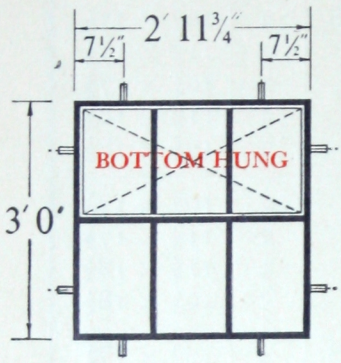
	SIZES
	11⅜ × 18¼
	11⅜ × 9¼

FANLIGHTS

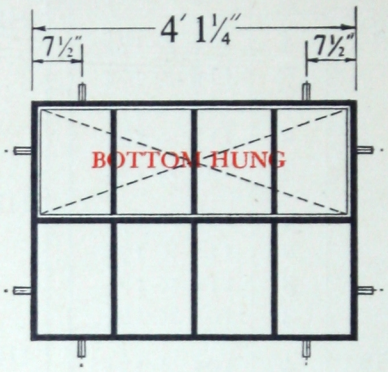
TYPE	NO. OFF	SIZES
NG25	2	9¾ × 21⅛
NG25F	1	8⅝ × 20
	1	9¾ × 21⅛
NG15	1	9¾ × 28¼
NG15F	1	8⅝ × 27⅛
NG8	2	9¾ × 18¼

TYPE	NO. OFF	SIZES
NG2	1	8⅝ × 17⅛
	1	9¾ × 18¼
NG5	1	9¾ × 18¼
NG1	1	8⅝ × 17⅛
NG6	1	9¾ × 9¼

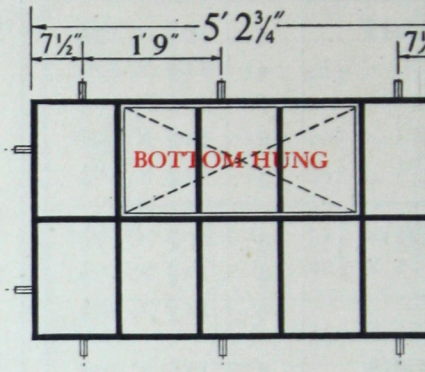
HOPE'S *Standard Steel Windows fo*
Cowhouses & Other Agricultural Building



Type A.G.1



Type A.G.2



Type A.G.4

Centres of holes are given for fixing to concrete
Slotted lugs, adjustable to brick courses, are supplied unless otherwise ordered

HOPE'S Agricultural Windows are made in three Standard Types and Size as illustrated above. They are prepared for inside putty glazing with a flange frame bar all round.

Ventilators are Bottom Hung on corner hinges and are fitted with steel sid cheeks with a quick-release lever to enable the ventilator to be folded righ down for maximum ventilation or cleaning.

Spring Catches for hand or pole operation are fitted to all ventilators. Hol are drilled for glazing and spring wire glazing clips will be supplied whe ordered. Special metal sash putty should be used.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

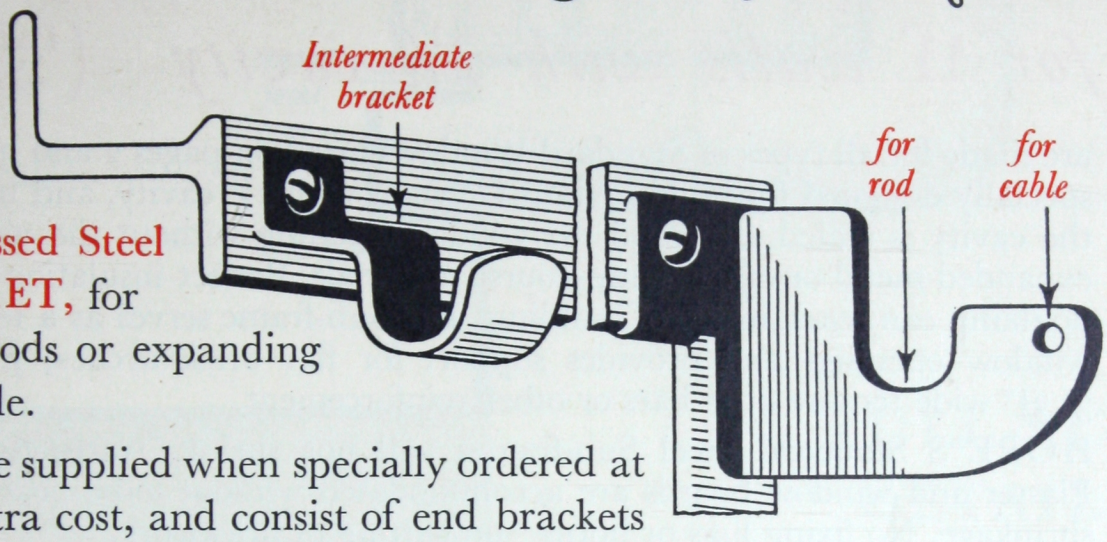
Handling, fixing and glazing instructions are sent with each consignment.

GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES
A.G.1	2	15½″ × 10½″
	1	15½″ × 11⅛″
	3	17⅛″ × 11⅛″
A.G.2	2	15½″ × 11″
	2	15½″ × 11½″
	4	17⅛″ × 11½″

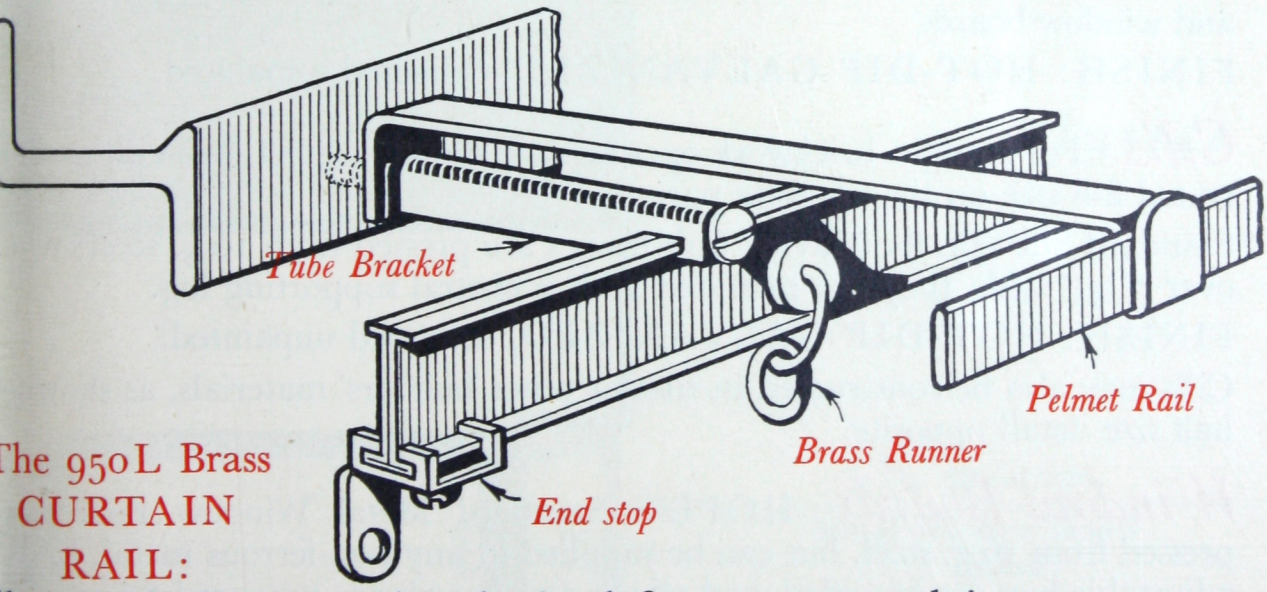
TYPE	NO. OFF	SIZES
A.G.4	3	17⅛″ × 11″
	2	17⅛″ × 12⅞″
	2	16⅝″ × 12⅞″
	2	15½″ × 10½″
	1	15½″ × 11″

HOPE'S *Curtain Fittings are of two kinds:*



The Pressed Steel BRACKET, for curtain rods or expanding steel cable.

These are supplied when specially ordered at slight extra cost, and consist of end brackets (in pairs) with intermediate brackets for windows over 1′ 8″ wide. They are rustproofed and can be fixed to the windows in the manner shown above, with $\frac{3}{16}$″ × $\frac{3}{16}$″ round head whitworth screws.



The 950L Brass CURTAIN RAIL:

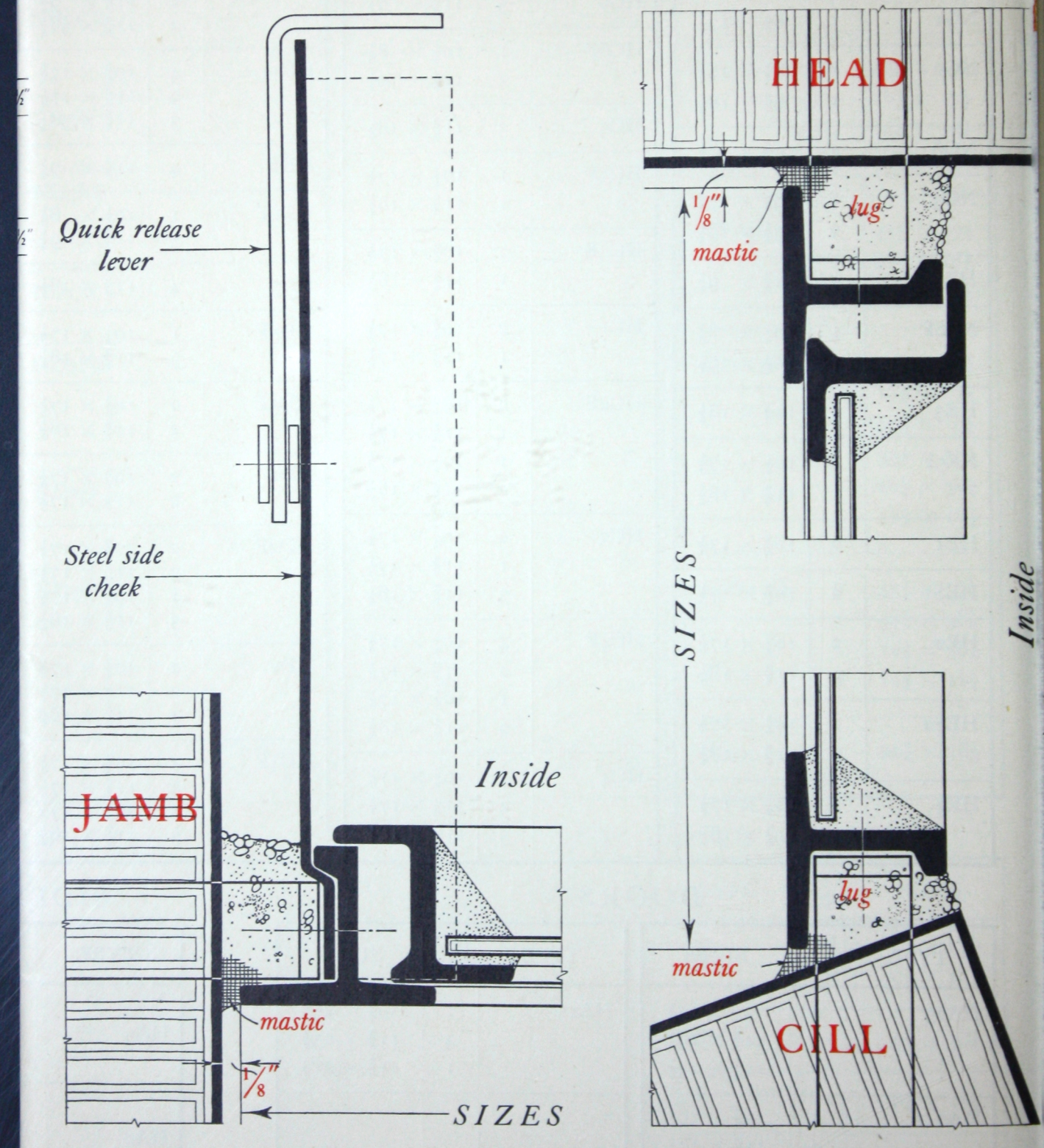
Illustrated above can be obtained from most good ironmongers or builders' merchants complete with special fixing screws and tube brackets for use with Hope's Windows. Pelmet rails and brackets can also be provided where specially ordered.

This curtain rail is easily fixed to the tapped holes in Hope's Windows, and can be obtained either in straight lengths or to fit round bays.

In case of difficulty in obtaining supplies please apply to us.

tural Windows · Galvanized

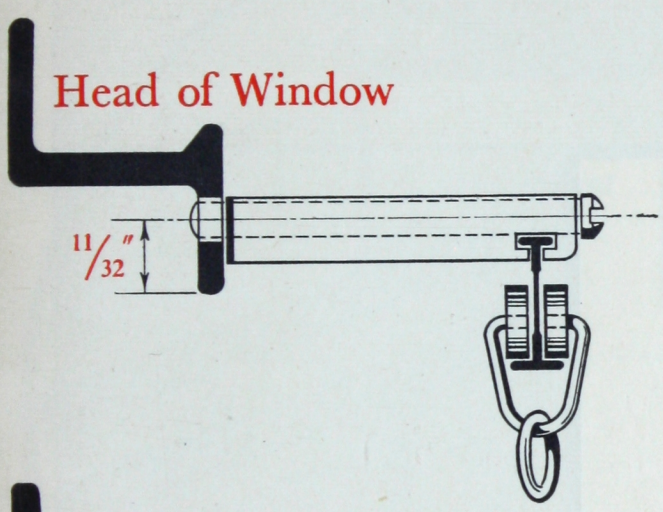
FULL SIZE DETAILS
Showing Fixing to Brickwork



All HOPE'S *Standard Windows & Doors* are prepared for curtain brackets before despatch.

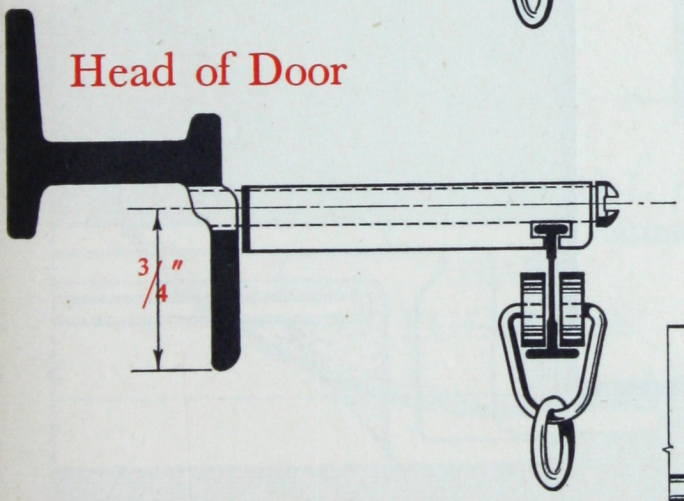
Holes are drilled and tapped in the head of the frame at centres given below, and are suitable for most types of curtain fittings.

Head of Window

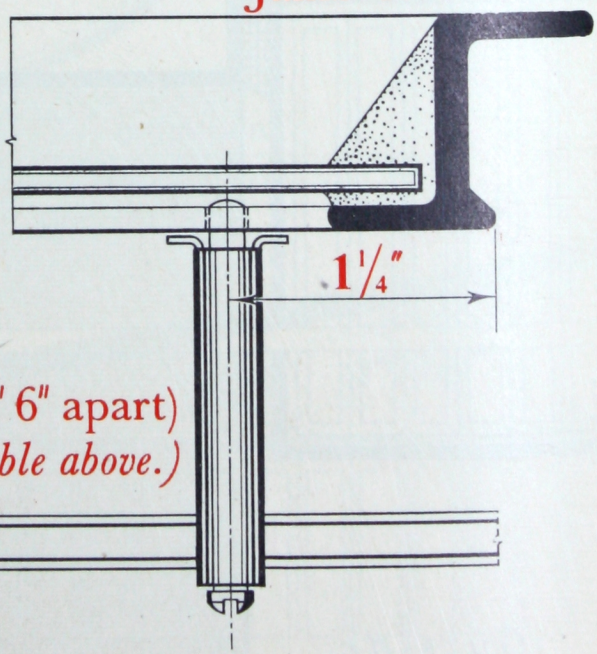


Standard Widths of Windows	No. of curtain brackets to each Window
11″	2
1′ 8″	2
2′ 6″ (*door*)	3
3′ 3¼″	3
3′ 9″ (*door*)	3
4′ 10½″	4
6′ 6½″	5

Head of Door

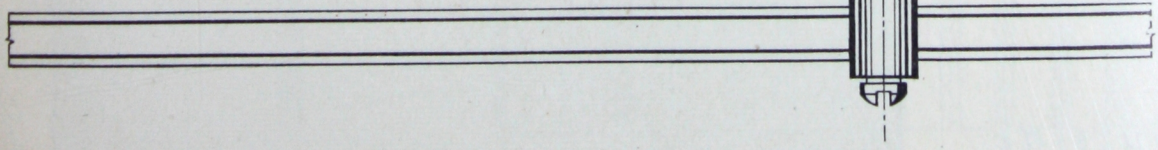


Jamb of Window



Full Size Details

Extra holes are drilled (approx. 1′ 6″ apart) in windows over 1′ 8″ wide. *(See table above.)*



HOPE'S CUR

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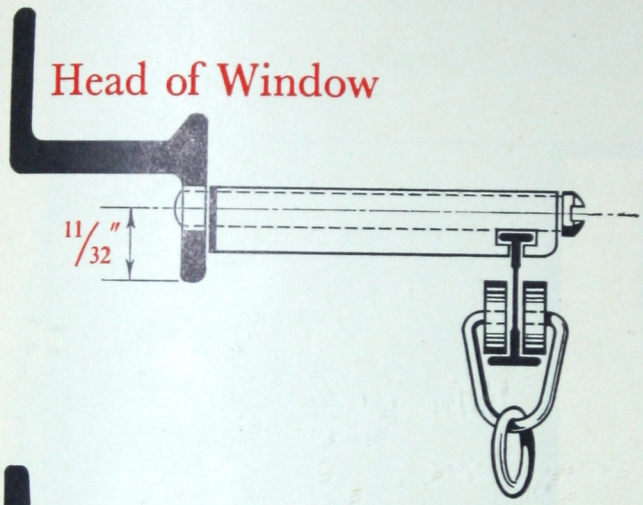
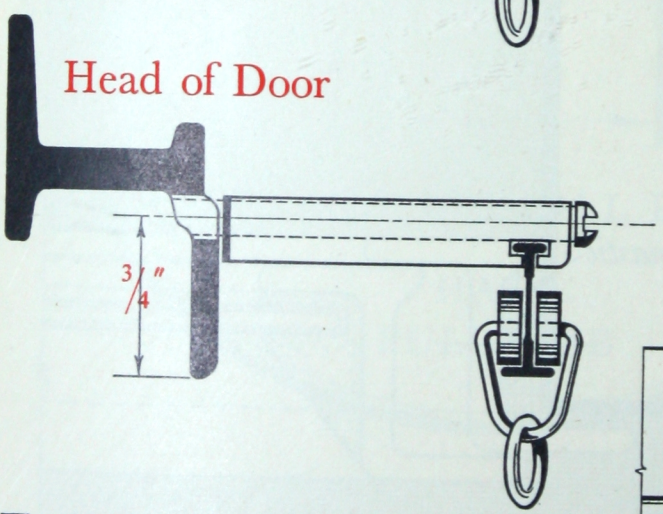
Head of Window



Head of Door



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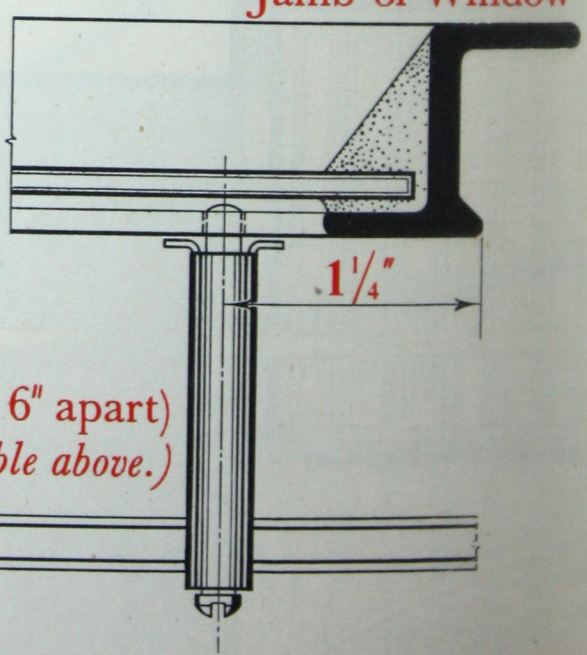
6′ 6½″	5

Jamb of Window



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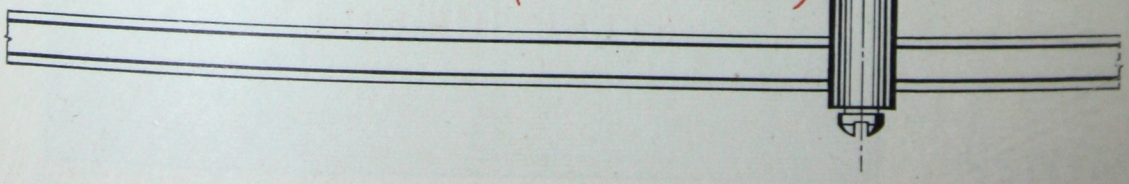
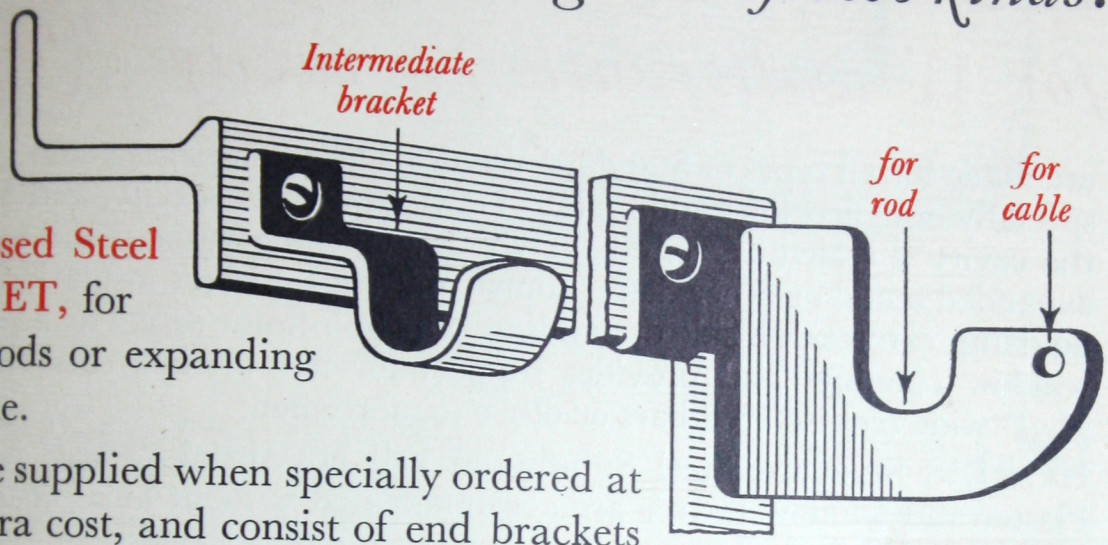


OPE'S *Curtain Fittings are of two kinds:*



Pressed Steel
ACKET, for
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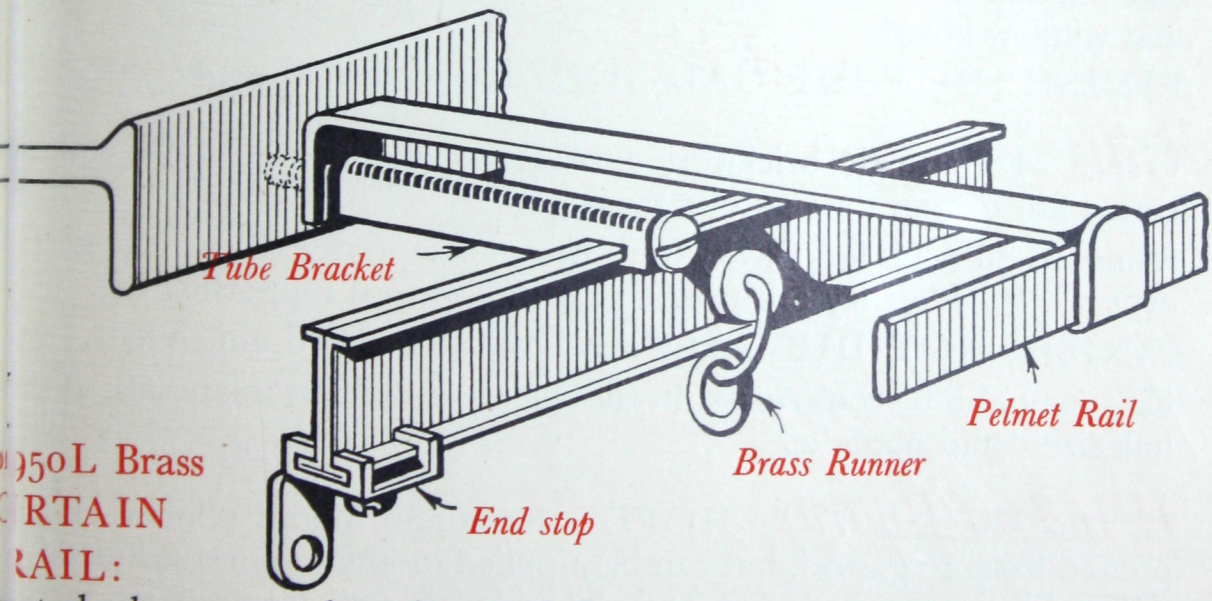

950L Brass
URTAIN
RAIL:
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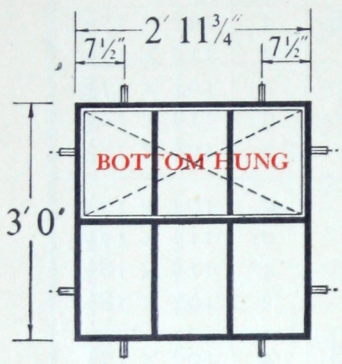
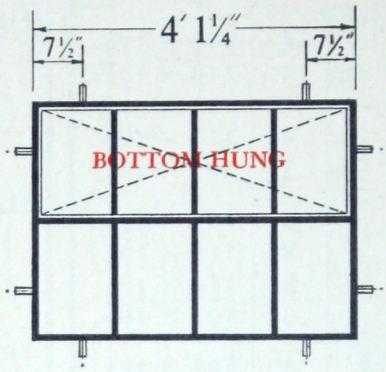
HOPE'S *Standard Steel Windows fo*

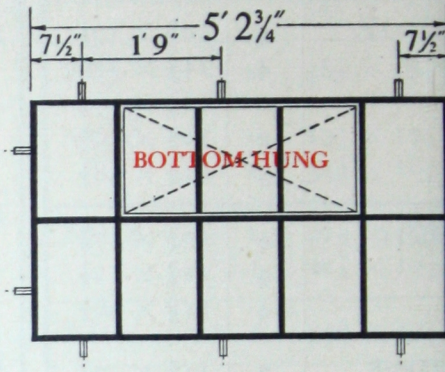
Cowhouses & Other Agricultural Building



Type A.G.1



Type A.G.2



Type A.G.4

Centres of holes are given for fixing to concrete
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Ventilators are Bottom Hung on corner hinges and are fitted with steel side cheeks with a quick-release lever to enable the ventilator to be folded right down for maximum ventilation or cleaning.

Spring Catches for hand or pole operation are fitted to all ventilators. Holes are drilled for glazing and spring wire glazing clips will be supplied when ordered. Special metal sash putty should be used.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

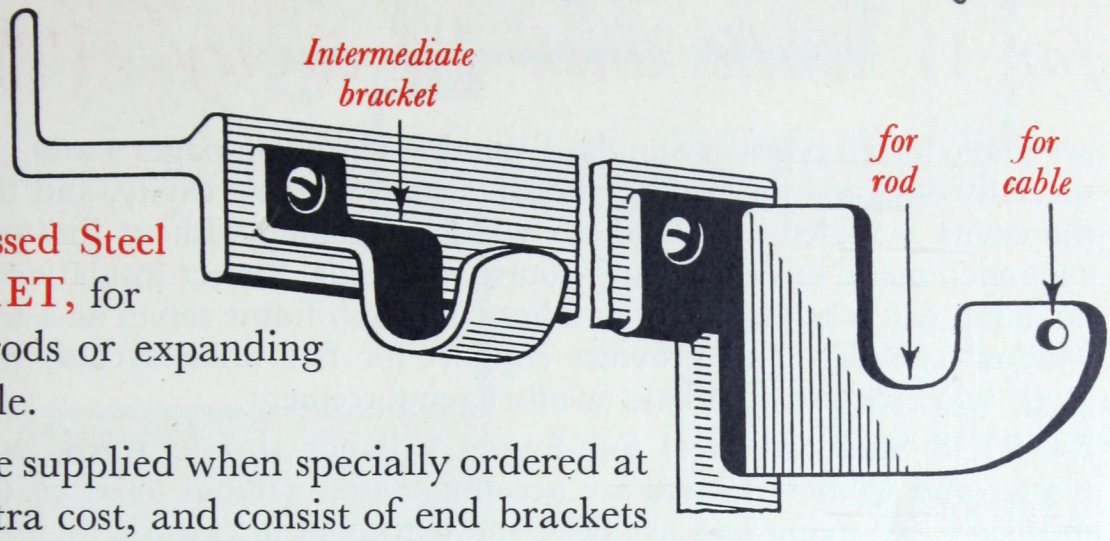
Handling, fixing and glazing instructions are sent with each consignment.

GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES
A.G.1	2	15½″ × 10½″
	1	15½″ × 11⅛″
	3	17⅛″ × 11⅛″
A.G.2	2	15½″ × 11″
	2	15½″ × 11½″
	4	17⅛″ × 11½″

TYPE	NO. OFF	SIZES
A.G.4	3	17⅛″ × 11″
	2	17⅛″ × 12⅞″
	2	16⅝″ × 12⅞″
	2	15½″ × 10½″
	1	15½″ × 11″

[OPE'S *Curtain Fittings are of two kinds:*



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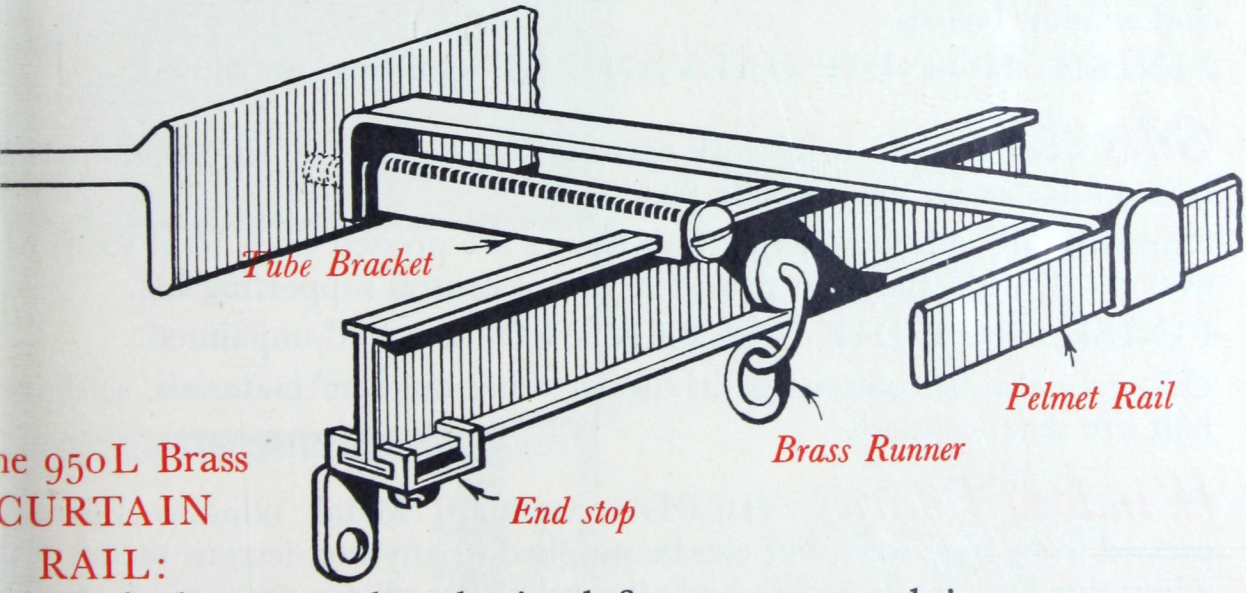

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CURTAIN
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case of difficulty in obtaining supplies please apply to us.

HOPE'S *Standard Steel Sub-frame for 11" walls with 2½" cavity*

(*Patent No.* 429359/39

are made for all types of Standard Windows listed on pages 2 and 3. They specially designed for building into 11" walls with 2½" cavity, and by their the cavity is sealed all round the window opening without the use of sla expanded metal or other damp-course materials. Perfect insulation is assur no damp can reach inside of building. The Sub-frame serves as a template window openings and provides support for flat brick arches; frames o 3′ 3¼″ wide require arch bars or other reinforcement.

HOPE'S Standard Steel Sub-frames will not shrink, warp, twist or Plaster and window boards are accommodated without loose beads to co shrinkage. No fixing lugs or horns—no cutting of brickwork.

Construction

HOPE'S 'Cavity' Sub-frames are pressed from 16 g. s and welded at all four corners. Fixing holes are provided to correspond w those in Standard Metal Windows, and all sub-frames are prepared for sub- and window boards.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

Cills

For straight brickwork openings we supply a Steel Sub-cill, as il trated full size on the opposite page.

Standard Sub-cills for 'Cavity' Sub-frames are pressed from 10 g. steel; wh over 3′ 3¼″ wide they are provided with a central supporting lug.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

Cills may also be constructed in tiles or other builders' materials, as show half size detail opposite.

Window Boards

HOPE'S Standard Metal Window Boards pressed from 16 g. steel, but can be supplied in any non-ferrous metal. Sli adjustable lugs are provided, and all window boards are prepared for screw to steel sub-frames.

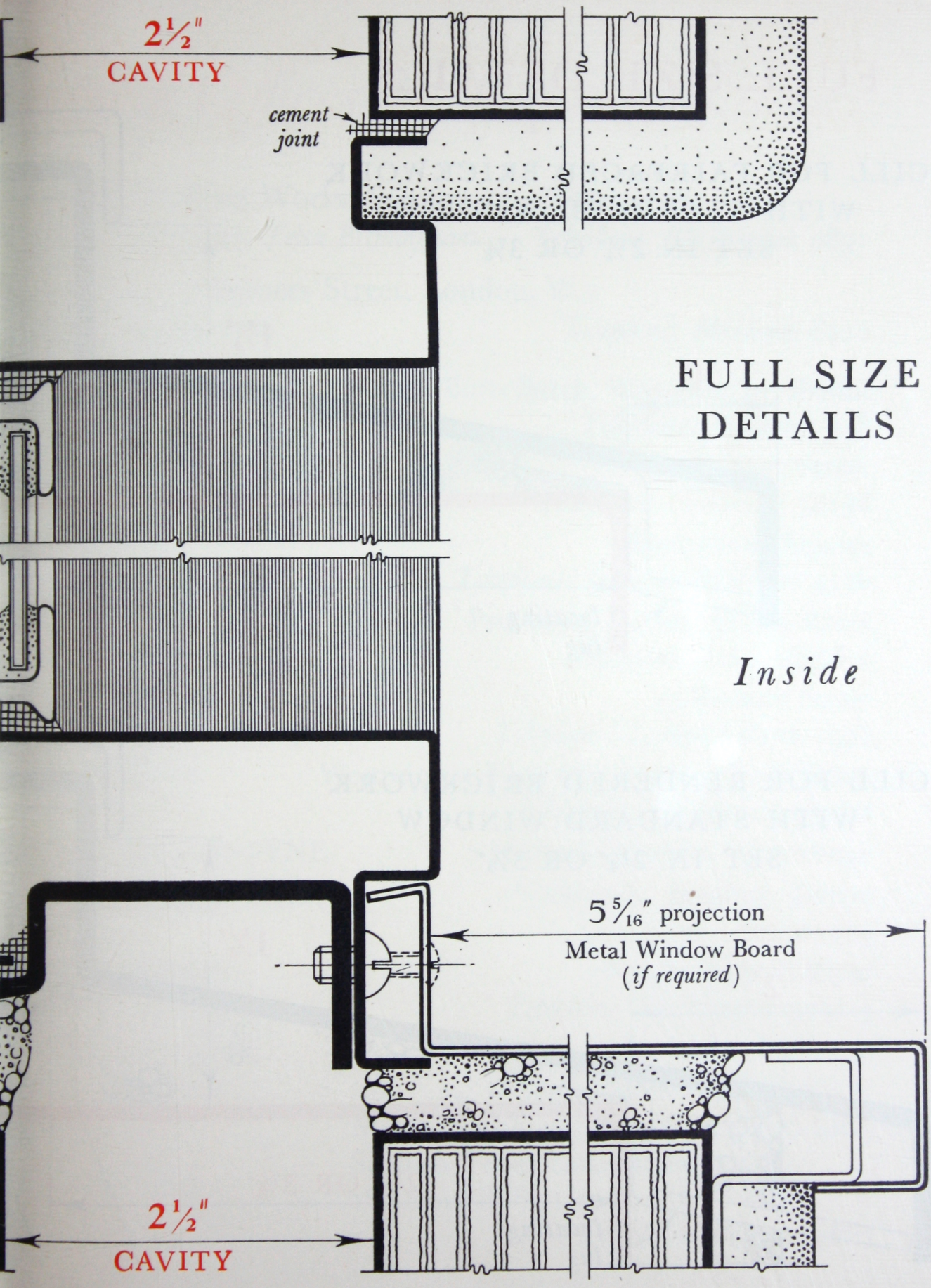
FINISH: painted one coat red oxide paint before despatch.

When Ordering

'Cavity' Sub-frames it is only necessary to inc them with the Standard Window as required, thus:

6 (six) ND 11 F *with 'Cavity' Sub-frames.*

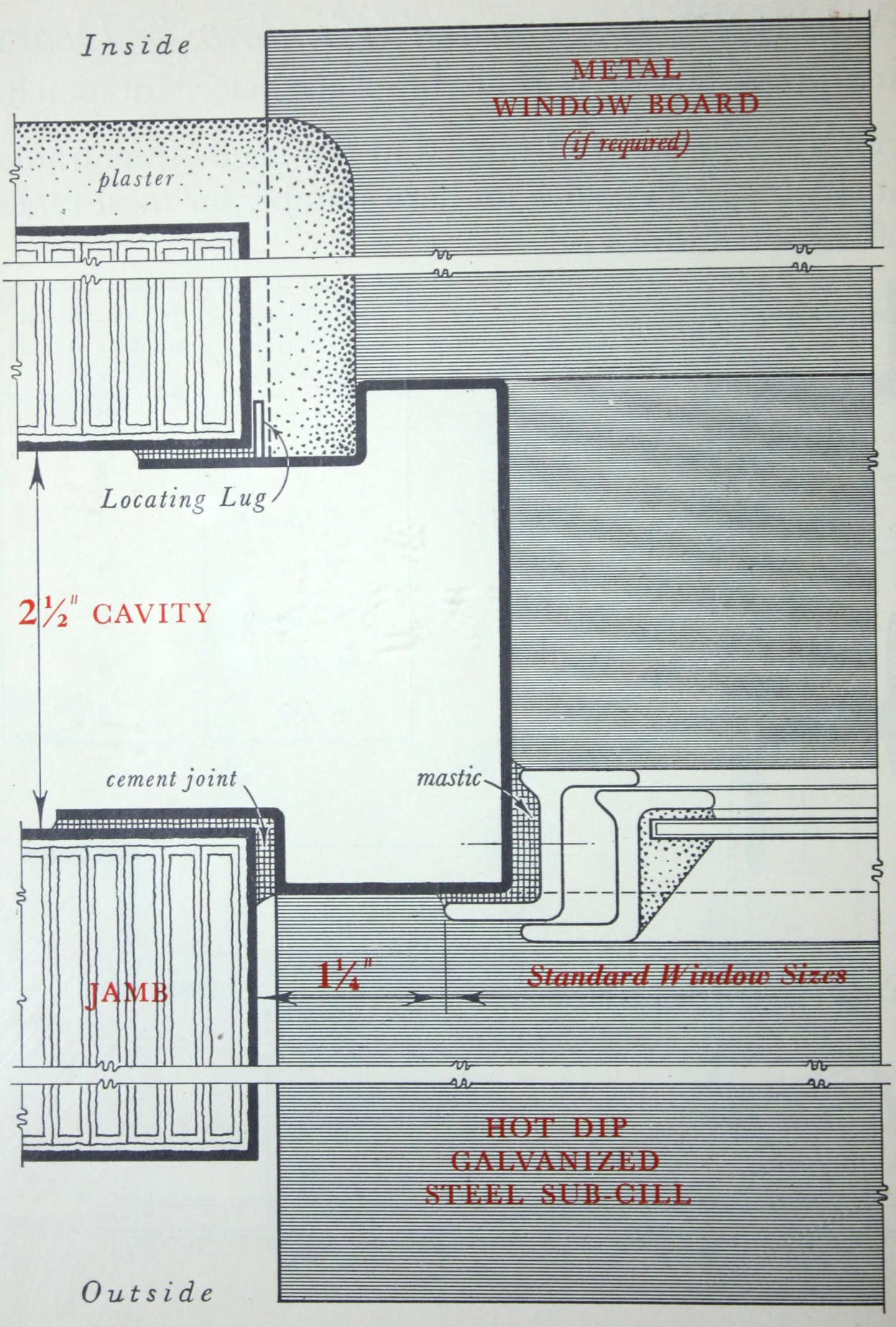
STATE whether Standard Steel Sub-cills and Metal Window Boards also required.



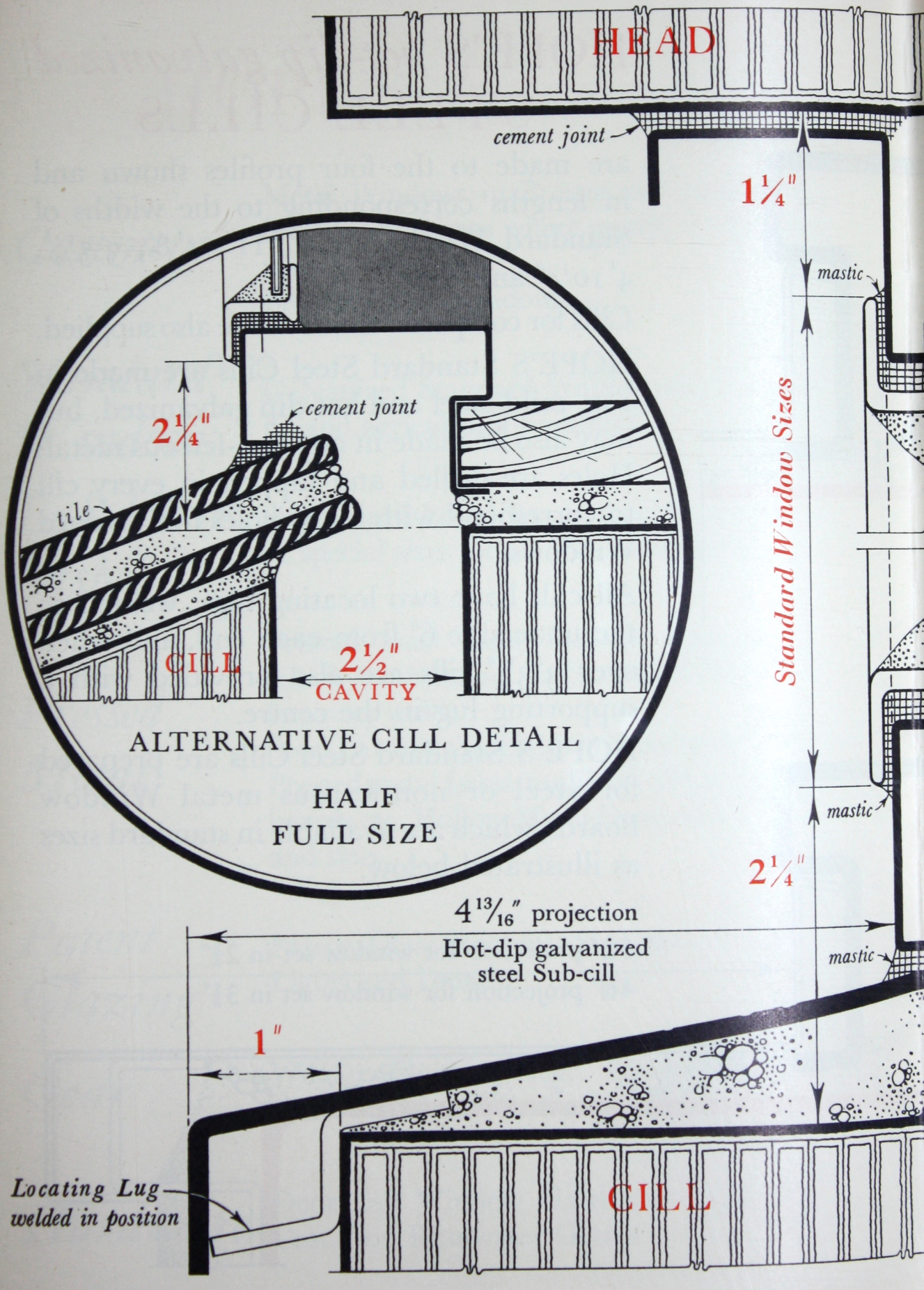
FULL SIZE DETAILS

Inside

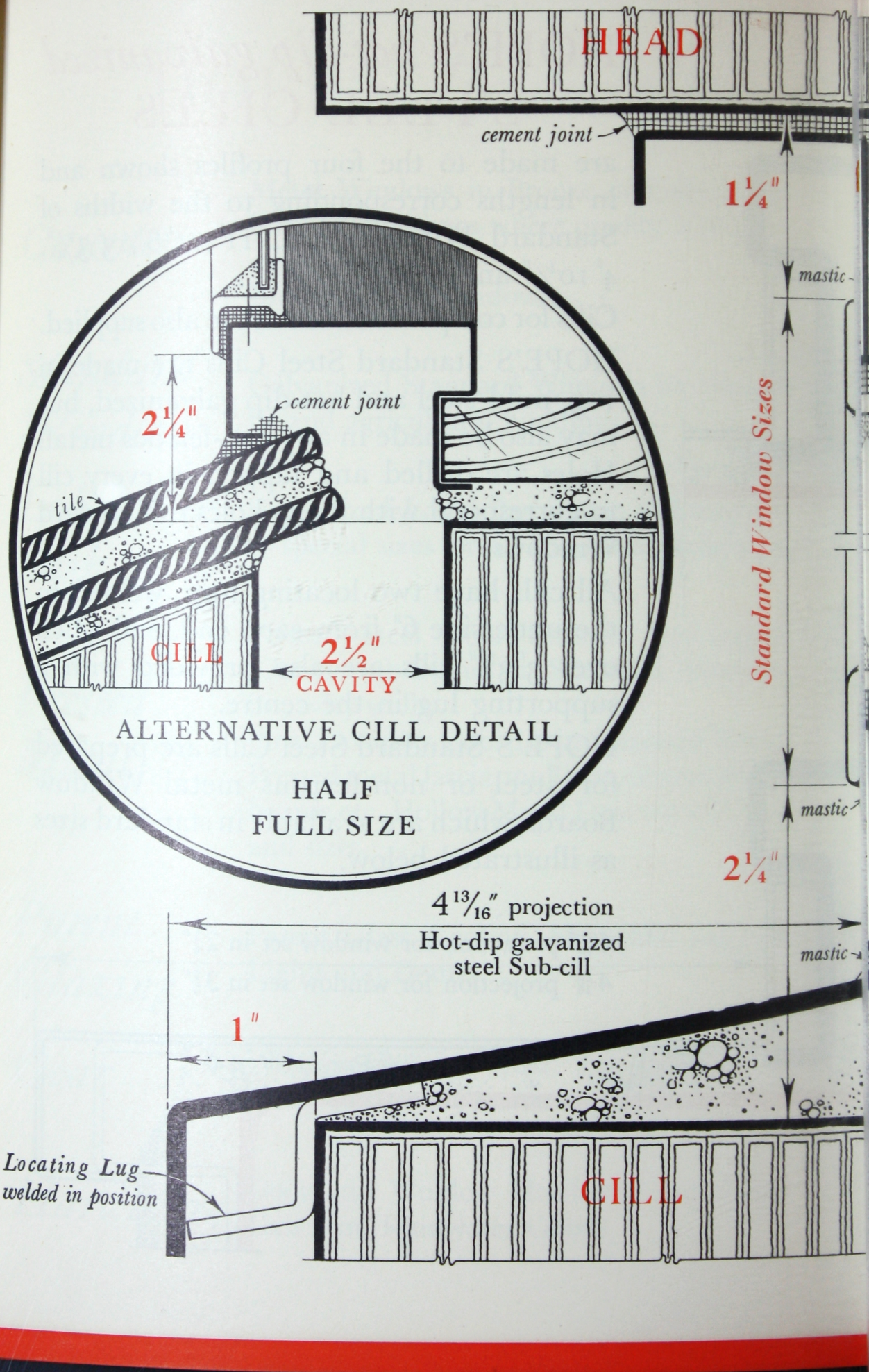
FRAMES (*Patent No.* 429359/33)

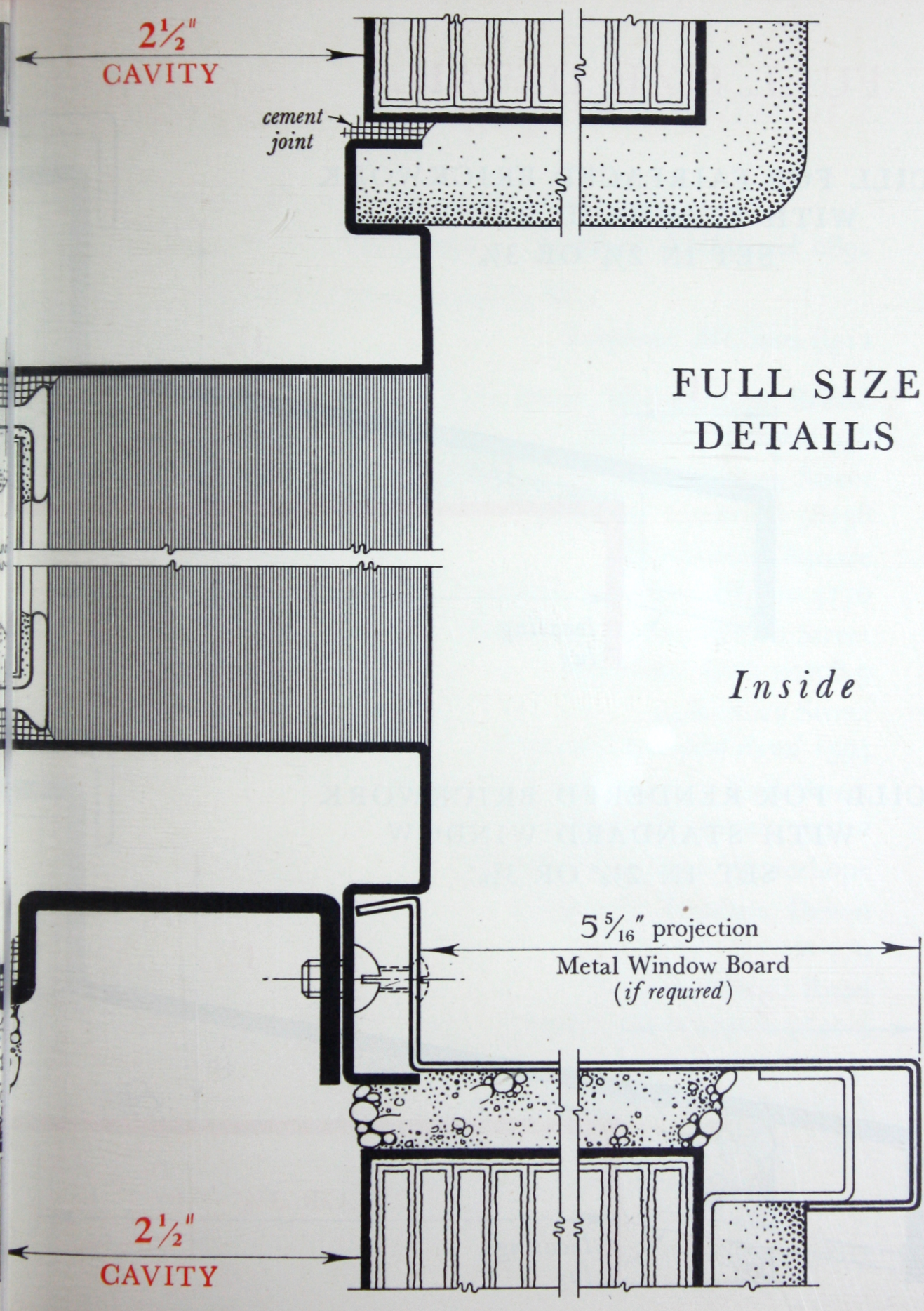


HOPE'S 'CAVITY' SUB-F



HOPE'S 'CAVITY' SUB





FULL SIZE DETAILS

Inside

HOPE'S *Standard Steel Sub-frame*
for 11" walls with 2½" cavity (*Patent No.* 429359/39

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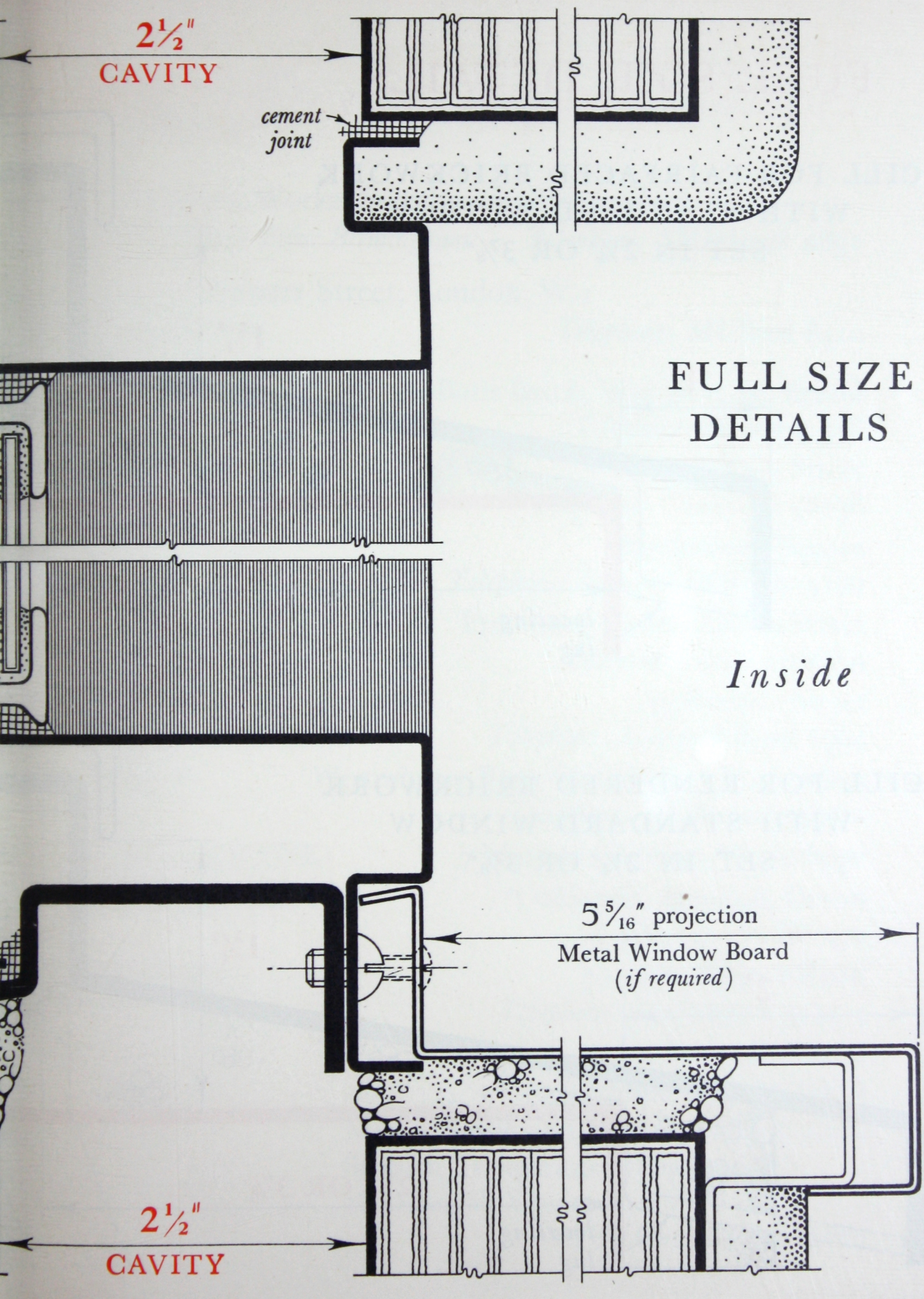
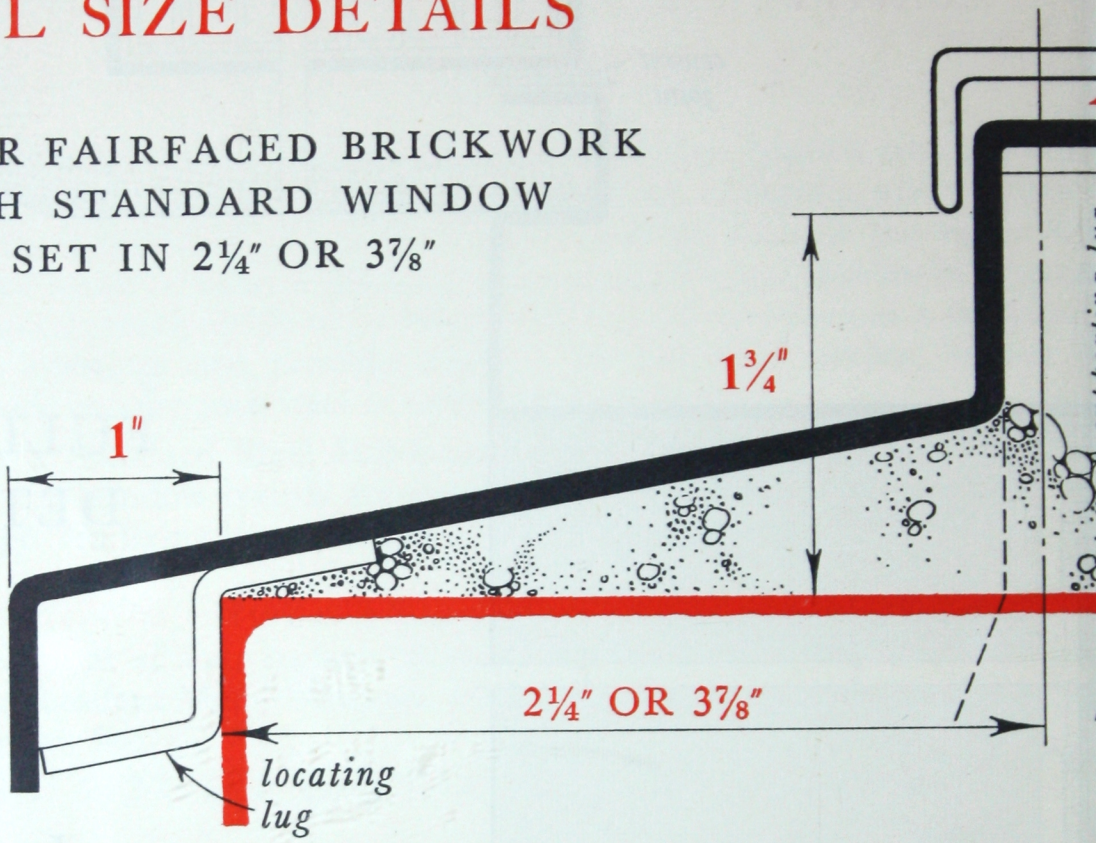


FULL SIZE DETAILS

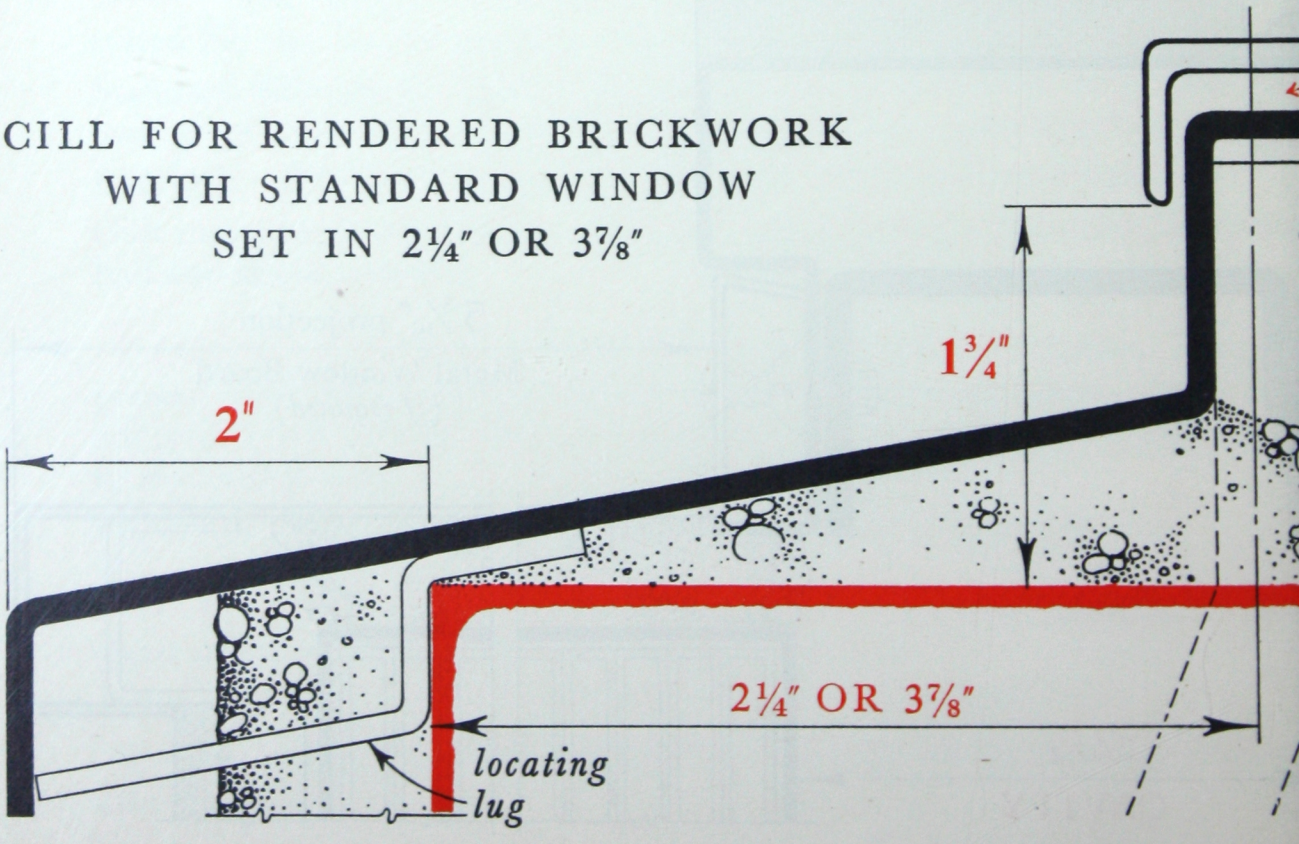
Inside

FULL SIZE DETAILS

CILL FOR FAIRFACED BRICKWORK WITH STANDARD WINDOW SET IN 2¼" OR 3⅞"



CILL FOR RENDERED BRICKWORK WITH STANDARD WINDOW SET IN 2¼" OR 3⅞"



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BELFAST	Messrs. Smith and Pearson (Belfast) Ltd., Scottish Temperance Buildings, 16 Donegall Square South *Telephone: Belfast* 22687

HOPE'S *hot-dip galvanized* STEEL CILLS

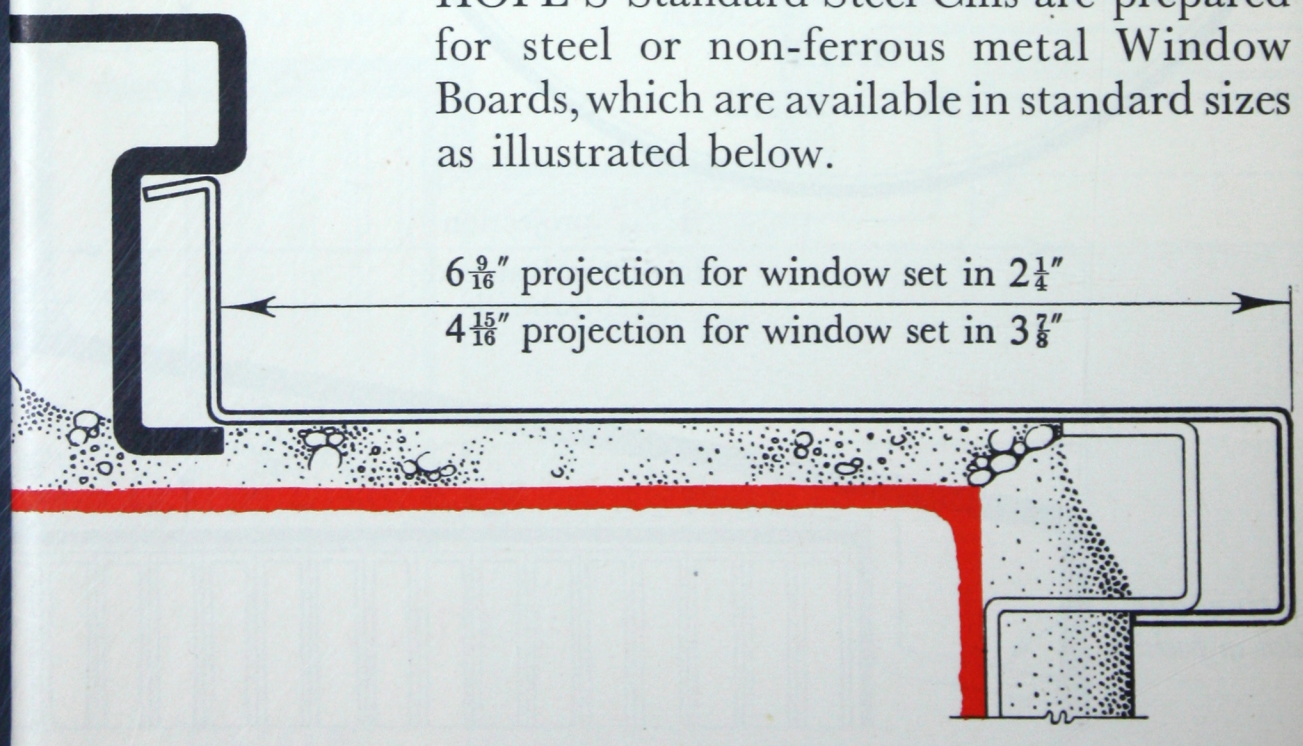
are made to the four profiles shown and in lengths corresponding to the widths of Standard Windows, i.e., 1 1″, 1′ 8″, 3′ 3¼″, 4′ 10½″ and 6 6½″.

Cills for composite windows are also supplied.

HOPE'S Standard Steel Cills are made in 10g. mild steel and hot-dip galvanized, but may also be made in any non-ferrous metal. Holes are drilled and tapped in every cill to correspond with fixing holes in Standard Windows.

All cills have two locating lugs, welded to the underside 6″ from each end, and when over 3′ 3¼″ cills are also provided with a supporting lug in the centre.

HOPE'S Standard Steel Cills are prepared for steel or non-ferrous metal Window Boards, which are available in standard sizes as illustrated below.



HOPE'S *Products*

Casement	Metal Windows in Bronze or Galvanized Steel for buildings where quality is of first-class importance. Bronze Ships' Windows.
Standard Window	Galvanized Standard Windows for domestic and agricultural buildings.
Lok'd Bar Sash	Galvanized Lok'd Bar Sashes in Standard or special sizes for all Industrial Buildings.
Pressed Metal	Pressed Steel Door Frames. Galvanized 'Cavity' sub-frames for Standard Windows in cavity walls. Steel Lavatory Cubicles in Standard Units. Pressed metal fascia, mullions, cills, window-boards etc. Hollow Metal Doors in all types and sizes.
Patent Glazing	Patent Glass Roofing, Skylights, Lantern Lights and Domes.
Gear	Window Opening Gear. Tension Rod Gear, electrically or hand controlled.
Hardware	Door and Window Hardware. Lead and Cast Iron Rainwater Goods.

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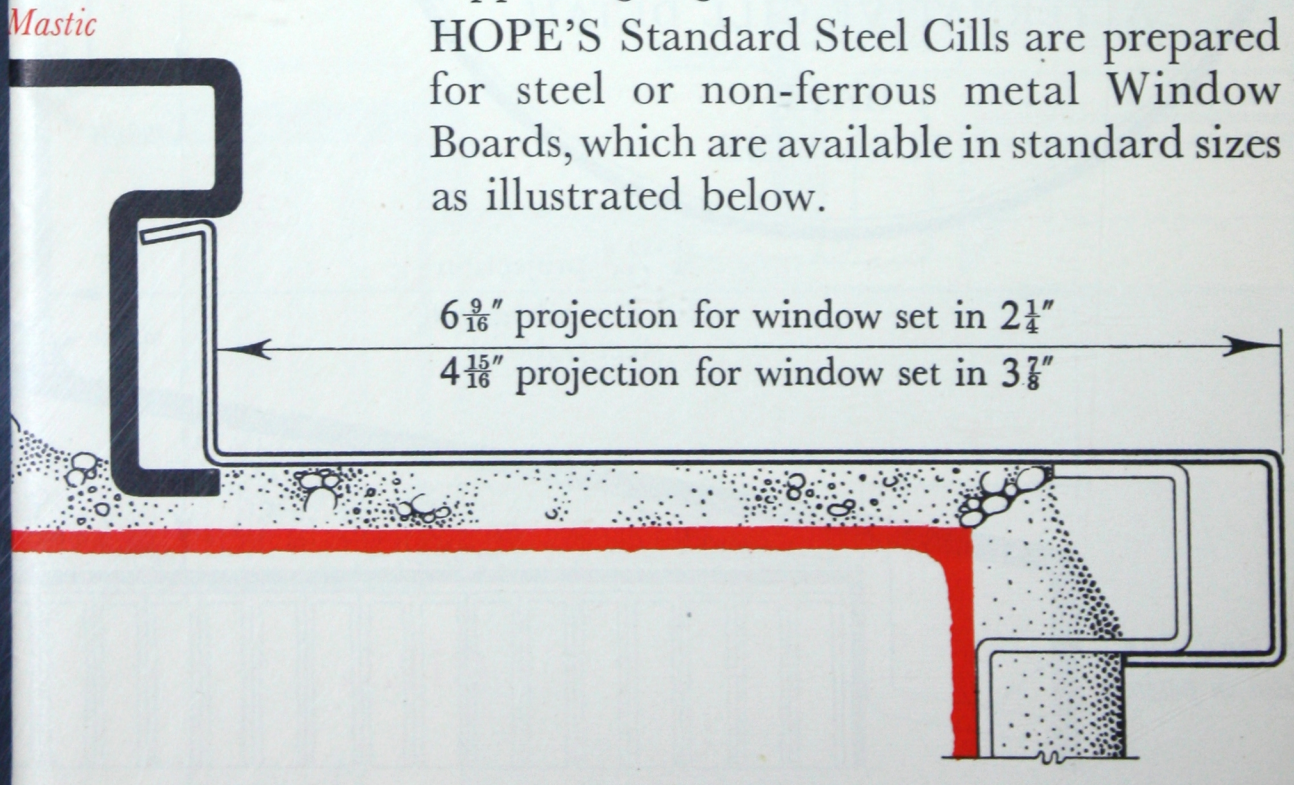

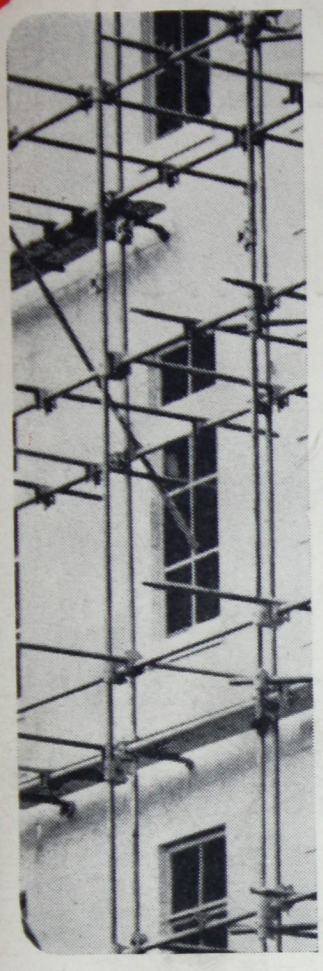

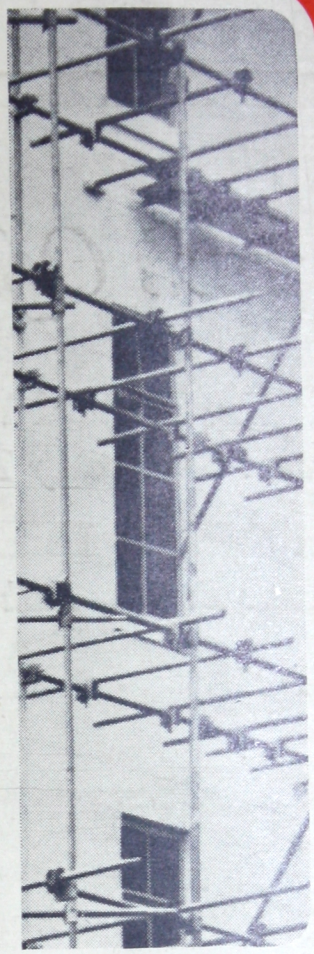

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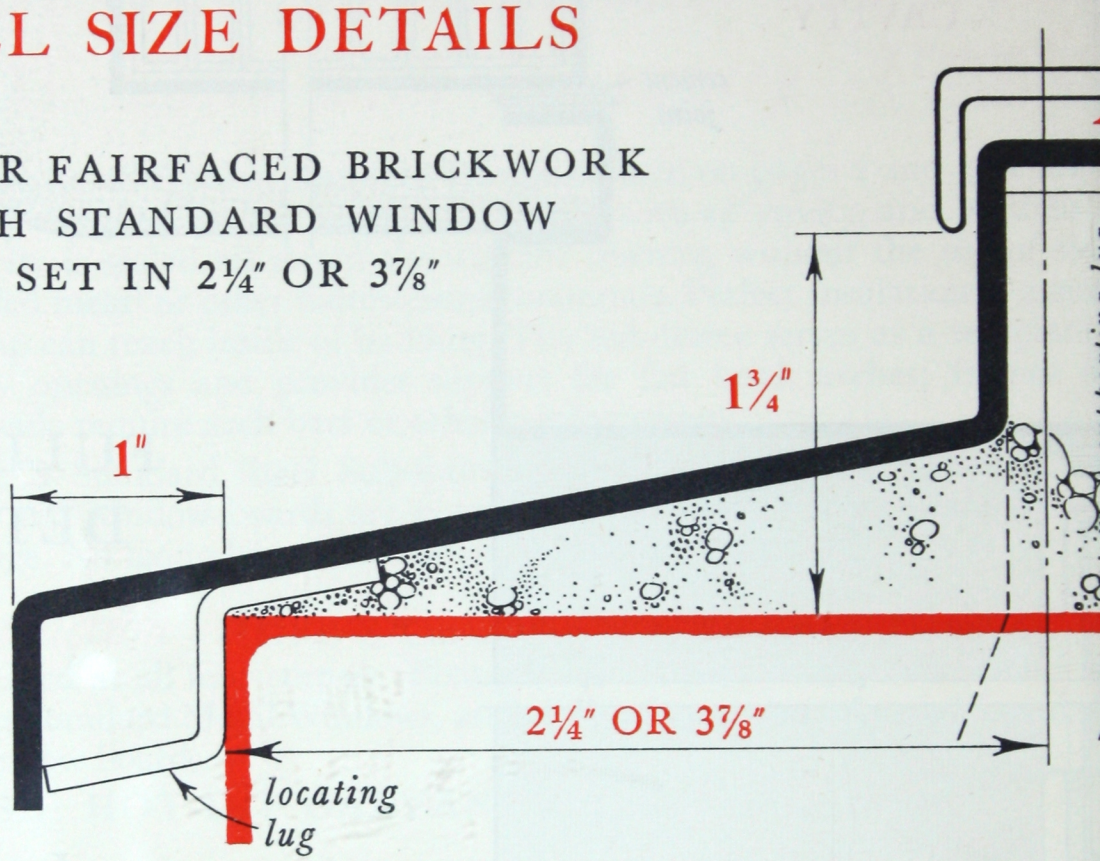

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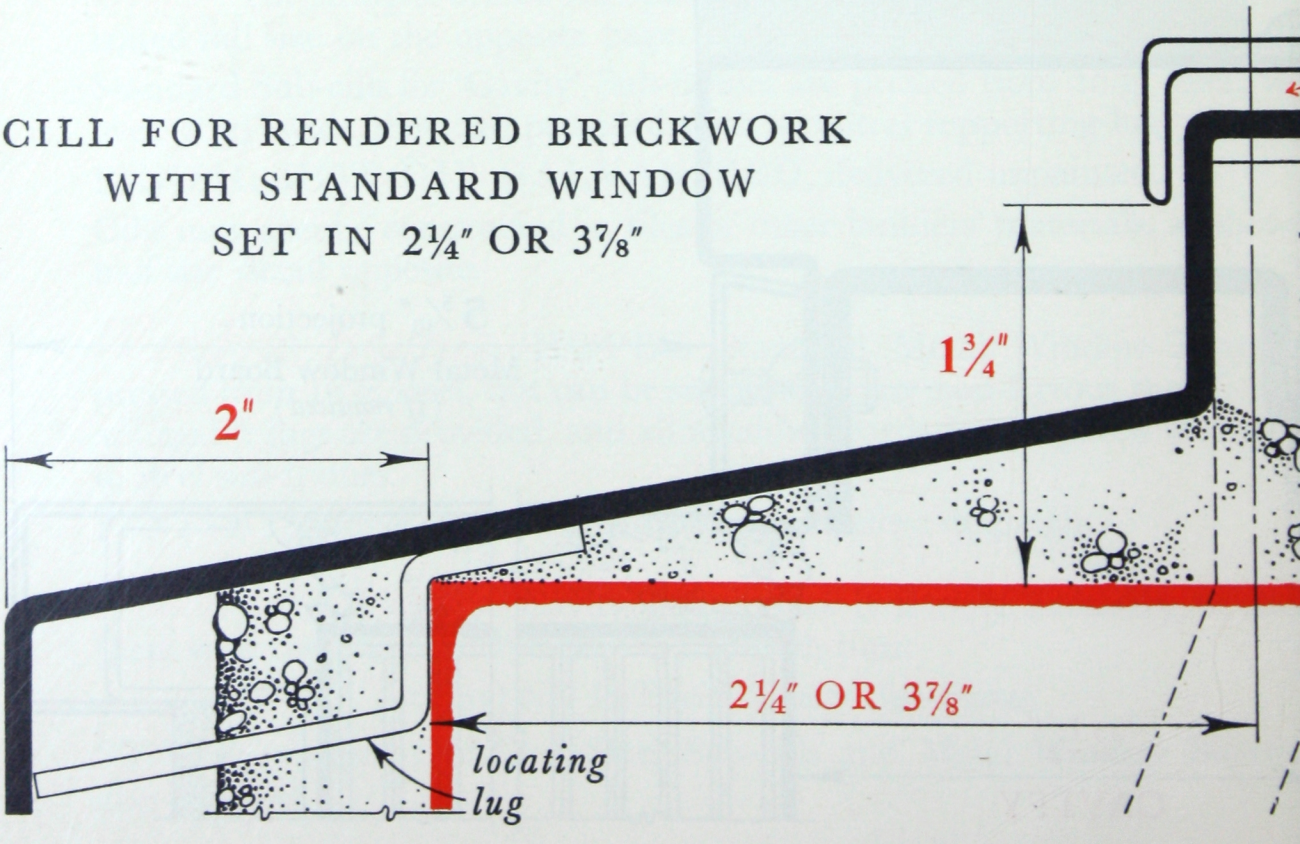

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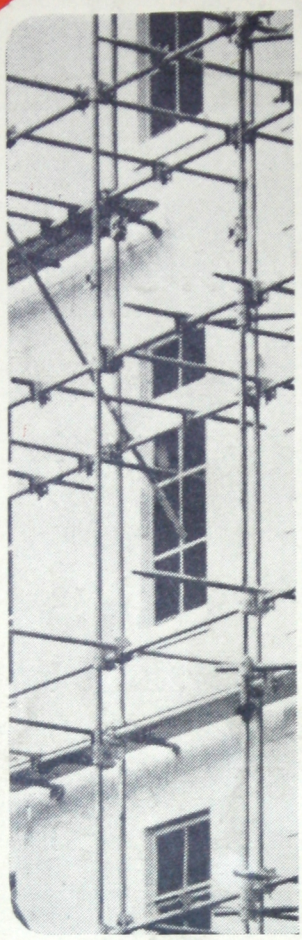

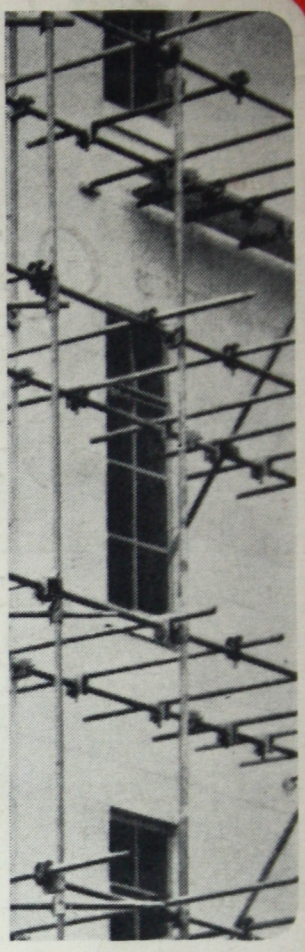

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